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A COMPARISON OF RETIREMENT INTENT
BETWEEN PRIOR AND NON-PRIOR ENLISTED OFFICERS

THESIS

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Major, USAF              Captain, USAF

AFIT/GLM/LSM/84S-13

DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
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Wright-Patterson Air Force Base, Ohio

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THESIS

Presented to the Faculty of the School of Systems and Logistics

of the Air Force Institute of Technology

In Partial Fulfillment of the

Requirements for the Degree of

Master of Science in Logistics Management

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Major, USAF                       Captain, USAF

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## Preface

Interest in this thesis topic began after hearing an Air Force
Military Personnel Center (AFMPC) personnel officer lament about two
prior enlisted aircraft maintenance officers who had decided to retire
instead of accepting promotion to major. We were aware of opinions
that most prior enlisted officers retire at their first opportunity to
do so as officers. We were also aware that many of our fellow officers
have prior enlisted service, and that loss of such experienced
personnel could adversely affect the USAF. Since professional
literature suggested that intent to leave an organization was often the
best predictor of departure, we became curious about what retirement
intent differences existed between prior and non-prior enlisted
officers. We hope that some of our research findings and lessons
learned will support continued study in this area. We extend our
thanks for the guidance provided by our advisor and readers.


HENRY B. WILLIAMS                    PHILIP C. DE BRUIN

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## Abstract

Personnel turnover and its many varied organizational costs are frequently explored and documented in private sector professional literature. Officer retirement is a type of personnel turnover that causes many adverse USAF conditions such as loss of experience which is difficult or costly to replace. Few published reports document studies of retirement causes, and fewer address comparisons between prior and non-prior enlisted officers.

A survey instrument was used to collect data for analysis of retirement intent, demographic, and biographical differences among prior and non-prior enlisted officers soon or currently eligible f officer retirement. The sampled officers worked in logistics career fields. Data on responses to retirement intent, demographic, and biographic questions reflected that the two groups were similar, which might suggest similar behavior. Prior or non-prior enlisted background would not have been an effective predictor of retirement intent. Thesis data suggested that the absence of job satisfaction might be an effective predictor of retirement intent for both groups of officers.

A COMPARISON OF RETIREMENT INTENT

BETWEEN PRIOR AND NON-PRIOR ENLISTED OFFICERS


I.  Introduction

## Overview

Personnel turnover has been the subject of research efforts since

the early part of the 20th century.  James L. Price, Chairman of the

Department of Sociology at the University of Iowa, defined turnover as

"the degree of individual movement across the membership boundary of a

social system" (27:4), and as a type of labor mobility called interfirm

movement, movement from one firm to another or a change of employer.

Since turnover is personnel movement across boundaries, it represents

both accessions into an organization and departures from the

organization such as quits, discharges, and deaths.

The primary interest in turnover and its importance to the study

of organizations "derives from its assumed negative impact on

effectiveness [27:10]."  Not all turnover has a negative impact on

effectiveness.  Discharges, layoffs, quits of workers who perform

poorly, and retirement that is imposed by the organization or by law

serve specific and positive functions.  However, the leaving of a good,

well-motivated, productive worker is turnover that does have a negative

impact on effectiveness.  This kind of turnover is costly in terms of

lost experience, lost productivity, replacement/recruitment expenses,

and additional training expenses.

Two broad aspects of military turnover include separation or exit prior to retirement eligibility, and retirement. Criteria for officer retirement is a minimum 20 years of active duty, a minimum 10 years commissioned service, and the absence of any other commitments incurred from recent promotion or assignment actions. Mandatory retirement is either a function of maximum attained rank and total years of service, or the result of other reasons such as medical disabilities. A continuum exists between retirement at the first opportunity and forced retirement. Military retirement at the first opportunity is similar to quits in a civilian organization, because the individual leaves the organization but normally does not leave the labor force.

## Problem Statement

USAF officer turnover characteristics influence efforts to plan and sustain a balanced force of sufficient rank, experience, and numbers. Retirement at the earliest opportunity represents an immense loss of experienced people. As personnel managers strive to plan and sustain a balanced officer force, they face the complication that prior enlisted officers are often eligible for officer retirement before similarly ranked non-prior enlisted officers. Prior enlisted officer decisions to retire at their first eligibility could cause an imbalance in expected major and lieutenant colonel resources, depending on their enlistment length and their proportion within their career specialty. A study of prior enlisted officer retirement attitudes and intentions could help predict this type of turnover and assist effective planning to sustain a balanced officer force.

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## Research Objectives

Our research purpose was to determine retirement intent differences between prior and non-prior enlisted officers. A questionnaire was used to collect data from prior and non-prior enlisted officers in USAF logistics career fields. The resulting data was then analyzed to test research hypotheses.

## Hypotheses to be Tested

**Hypothesis One.** Except for rank and related military pay, prior and non-prior enlisted officers are peers in terms of demographic and biographical data.

**Hypothesis Two.** Prior enlisted officers soon or currently eligible for officer retirement have the same retirement intentions as non-prior enlisted officers soon or currently eligible for retirement.

**Hypothesis Three.** Prior and non-prior enlisted officers view the potential for increasing financial income or benefits as the primary factor affecting retirement plans.

## II. Literature Review

### Introduction

Turnover research has frequently attempted to determine turnover correlates, indicators to which turnover is related; determinants, analytical variables believed to produce variations in turnover; and intervening variables, variables that mediate the interaction between determinants and turnover. According to Price, the major correlates are length of service, age, level of employment, level of skill, blue-collar vs. white-collar work, and cultural differences. Weaker correlates are education, level of management, government vs. non-government, and sex (27:24-41). The major determinants include pay, integration, communication, and centralization, while the key intervening variables are identified as satisfaction and opportunity (27:66). There is also considerable research directed toward developing models of the turnover process that tie these correlates, determinants, and intervening variables together. Previous AFIT theses by Flanigan and Little in 1980 (9), Lazar and Maloney in 1982 (14), and Meola and Koechel in 1983 (15), have thoroughly reviewed the various turnover models proposed by noted researchers such as Price; Mobley; Bluedorn; Martin; March and Simon; and Mowday, Porter, and Steers.

### Scope and Limitations

Intent to quit as a precursor to turnover is a recurring element in most research and turnover models. The Air Force Human Resources Laboratory (AFHRL) published a bibliography of turnover literature listing over 350 studies and publications (4). Since our research is

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concerned with intent to quit the military prior to mandatory retirement, our literature review concentrated on intention to quit and its role in the prediction of turnover. Additionally, several specific officer turnover studies were reviewed.

## Non-Military Studies

In 1973, Lyman W. Porter and Richard M. Steers, professors at the University of California, Irvine, reviewed research on turnover and absenteeism (26). They attempted to relate the research findings of the reviewed studies to the organizational and work environment, to provide a conceptual framework for viewing the findings, and to present considerations for future research. Porter and Steers cited four previous reviews of turnover literature and presented a brief summary of those reviews. The 1955 review by Brayfield and Crockett, the 1957 review by Herzberg et al., Vroom's 1964 review, and parts of Schuh's 1967 review found a consistently negative relationship between job satisfaction and the propensity to leave an organization.

The Porter and Steers review covered 60 studies not previously covered. Porter and Steers made a major observation that the studies point to:

> the importance of job satisfaction as a predictor of turnover. However, it appears that expressed intentions concerning future participation may be an even better predictor [26:153].

Porter and Steers proposed that "an expressed intention to leave may represent the next logical step after experienced dissatisfaction in the withdrawal process [26:153]."

Allen I. Kraut of the IBM Corporation, stated that using job

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attitudes as a predictor of turnover would not work because
organizations and employees are too different to allow for the accurate
application of a model of job attitudes that predicts turnover (12).
Kraut agreed with Porter and Steers when he wrote "It is more likely
that the employee himself is the best means of properly weighting and
integrating the factors that go into a decision to quit or to remain in
a job [12:235]." Kraut's research was based on the hypothesis that
"the best prediction of turnover can come from the employee's direct
estimate of his future tenure [12:235]." In 1964, Kraut surveyed 911
salesmen about their job attitudes. In 1969, he used the 1964 data and
180 of the 1964 respondents to conduct a longitudinal comparison of
employee attitudes. For the next six years, Kraut monitored company
records to determine employee turnover and the reasons why people left.
He included only voluntary departures in his final analysis. A major
conclusion was that "a direct measure of an employee's intent to remain
with an organization is a more powerful predictor of his later turnover
than are other measures of job satisfaction 12:241 ." Kraut stressed
that these predictions were most effective for the short-term period of
less than 18 months, but were still significantly related to turnover
for many years. Kraut also indicated that job attitudes concerning the
work itself were strongly related to an employee's stated intention to
stay in or leave a company.

A 1976 study by L. K. Waters et al. (35) of Ohio University
supported Kraut's conclusions. In that study, 152 nonsupervisory
female clerical workers in an insurance company's regional office were
questioned about biographical items and intent. Two years after the

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data were collected, company termination data were reviewed. Waters wrote that "intent to remain with the company correlated higher with termination than any satisfaction scale or biographical variables [34:58]." In the conclusion portion of the study, it was further stated that:

> In conjunction with the results of Kraut's (1975) study with male salesmen, the present data offer strong support for the generality and utility of using an employee's estimate of his/her future tenure with a company as a predictor of termination decision [35:60].

In 1977, William H. Mobley of the University of South Carolina published a heuristic model of the turnover decision process (18). He cited a 1976 literature review by E. A. Locke in which Locke noted that "while the reported correlations between employee turnover and job satisfaction have been consistent and significant, they have not been especially high (usually less than .40) [18:237]." Mobley proposed that the reason for the low correlations was that there were probably other variables mediating the relationship between job satisfaction and the act of quitting. Mobley proposed a heuristic model to "guide thinking and empirical research toward a valid descriptive model . . . [18:239]."

Mobley's heuristic model (Figure 1) suggested that job dissatisfaction stimulates thoughts of quitting which lead to an evaluation of the expected utility of a job search, the intention to search for a job, the search for alternative jobs, the intention to quit, and then the final decision and behavior. The lines connecting various blocks indicate that the turnover process is iterative. For example, after evaluating the expected utility of a search and

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```
 A ──────── Evaluation of existing job
              │
 B ──────── Experienced job satisfaction/
            dissatisfaction                     note a
              │
 C ──────── Thinking of quitting
              │
 D ──────── Evaluation of expected utility
            of search and cost of quitting
              │
 E ──────── Intention to search for
            alternatives                        note b
              │
 F ──────── Search for alternatives
              │
 G ──────── Evaluation of alternatives          notes c,d
              │
 H ──────── Comparison of alternatives
            vs. present job
              │
 I          Intention to quit/stay
              │
 J ──────── Quit/stay                           note e
```

note a.  Alternative forms of withdrawal, e.g. absenteeism
         or passive job behavior, may be selected.

note b.  Non-job related factors, e.g. transfer of spouse,
         may stimulate intention to search.

note c.  Unsolicited or highly visible alternatives may
         stimulate evaluation.

note d.  One alternative may be withdrawal from the labor
         market.

note e.  Impulsive behavior may affect this action.

(18:238)

Figure 1. Heuristic Turnover Model

considering the cost of quitting (block D), it may be felt that the

cost is too high or the search futile.  This would cause reevaluation

of the existing job or possibly lead to other forms of withdrawal.

In 1978, Mobley et al. conducted a study of 203 hospital employees

to evaluate a simplified version of his 1977 heuristic model (19). The primary objective of the research was to evaluate how the variables combine in influencing turnover. The research was designed to "test the proposition that the influence of job satisfaction on turnover is indirect . . . and that intention to quit is the immediate precursor of actual termination [19:409]." The simplified version is shown in Figure 2.

Job Satisfaction

Thinking
of
quitting

Age/tenure          Intention
to search

Intent to
quit/stay

Probability of finding an
acceptable alternative          Quit/Stay
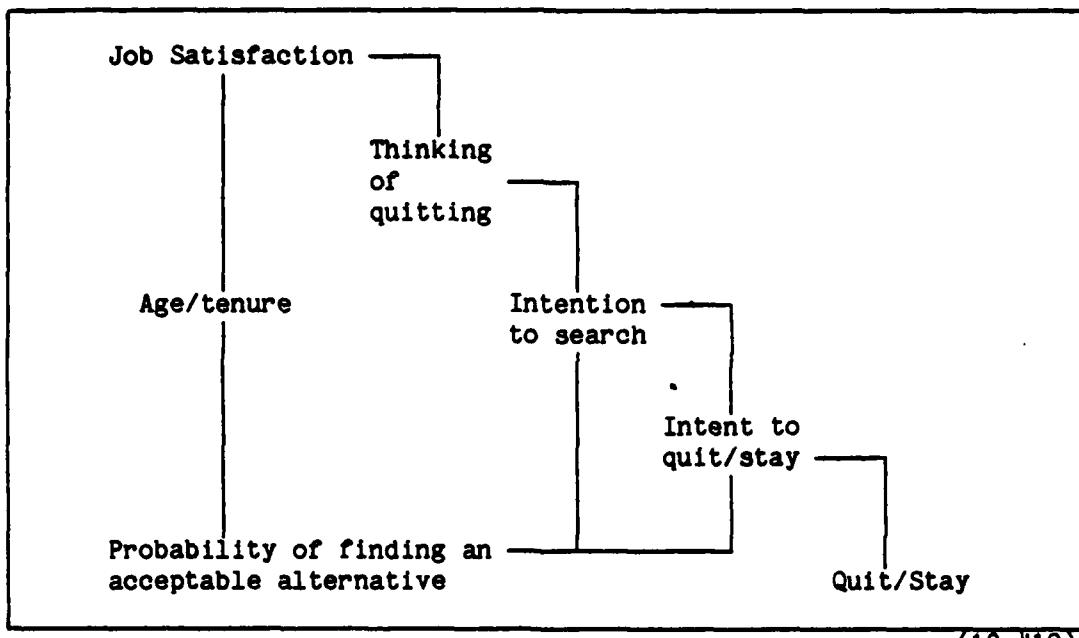
(19:410)

Figure 2. Simplified Turnover Model

Using the results of a variety of measures, including the Brayfield and Rothe Index of Job Satisfaction and the Job Descriptive Index, Mobley et al. conducted a multiple regression on the stages of the model, from thinking of quitting to actual turnover. Mobley found that "in each instance, the immediately preceding variable . . . exhibited, as hypothesized, the strongest coefficient with the next

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variable in the equation [19:411]." One result of the research was that the probability of finding an acceptable alternative exhibited a significant relationship with thinking of quitting but not with intention to search or intention to quit, as proposed by the model.

Darrell Roach of Nationwide Insurance and L. K. Waters published a 1979 study that surveyed 132 female clerical workers (29). This longitudinal study used the same basic techniques as Waters' earlier study. Two years after collecting satisfaction and intent data, they reviewed absence records and terminations (29:394) and computed correlation coefficients (R values), measures of strength of linear relationships. They found that intent strongly correlated with turnover during the first year (R = .52) and moderately during the second year (R = .26). This supported Kraut's findings that intention was a strong predictor during the short-term, but less strong during following years. Their study also found that job satisfaction had a much weaker relationship during each of the two years (R values of -.25 and -.14, respectively). These results fit well with the model proposed by Mobley in 1977 and the results of Mobley's 1978 study.

After conducting a review of turnover research and analyzing the findings, Mobley (20) published a revised and refined conceptual model of the employee turnover process (Figure 3). He stressed that satisfaction, attraction and expected utility of the present job, and attraction and expected utility of alternatives all contributed to intentions in an equal fashion. Satisfaction is an assessment of the job at the present time. Attraction and expected utility of the present job is an assessment of how well the present job will lead to

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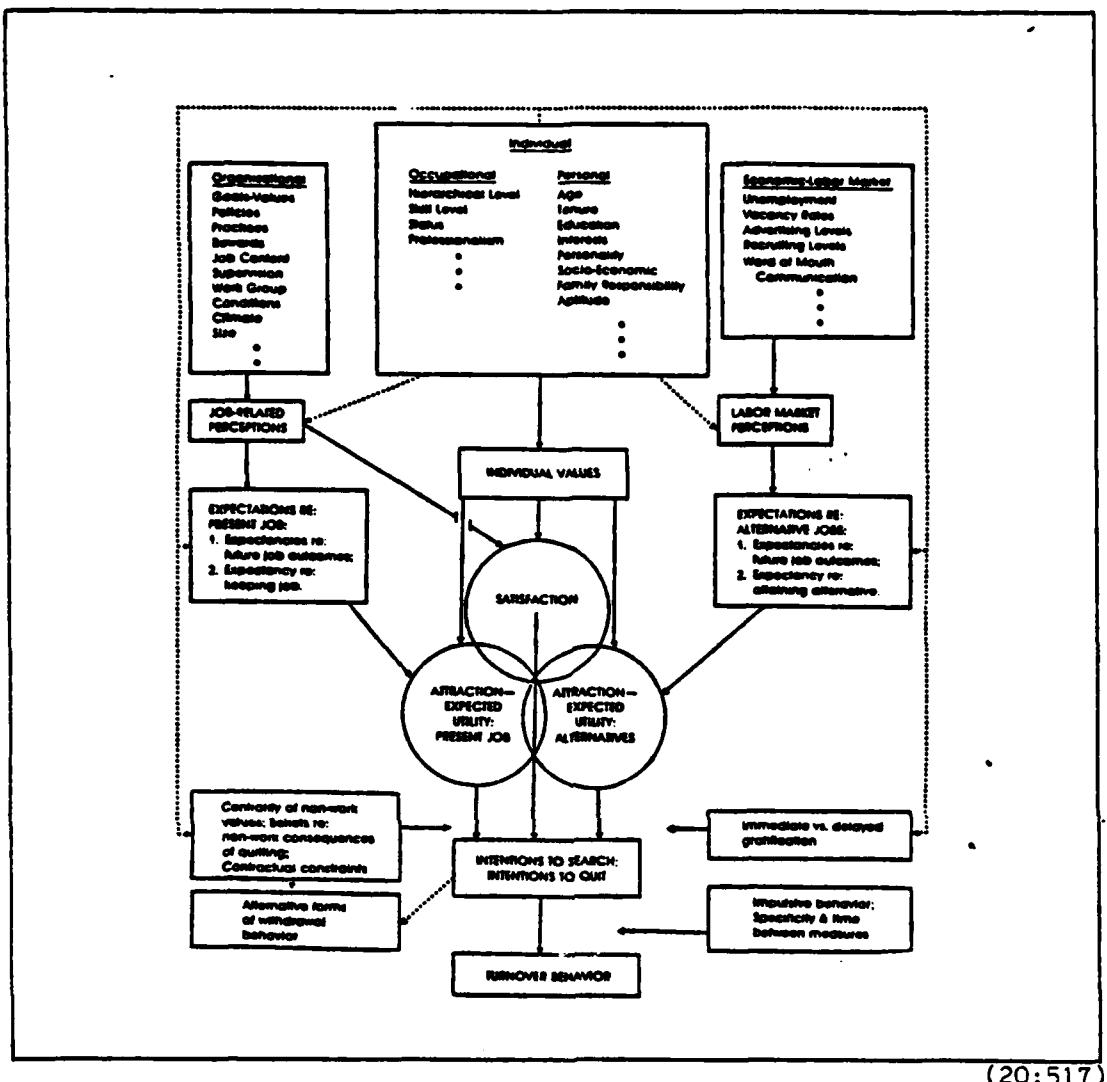
(20:517)

Figure 3. Mobley's Conceptual Model

future attainment of various desired goals (20:518). The attraction

and expected utility of alternatives is an assessment of how

alternative jobs will lead to attainment of desired goals. The

intersecting of these areas represents the correlation between them.

This correlation would be expected since there are individual values

that are common to these areas. The model shows that there are many

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variables that can be expected to moderate the relationship between intention and the three interconnecting variables preceding intention. The extent to which work is the central life interest of the individual and the extent to which the individual associates significant non-work consequences with quitting can attenuate these relationships (20:519). A variable that is present in the military that can also attenuate these relationships is the extent to which an individual is bound by a contract. Contractual binding, combined with dissatisfaction or low attraction, can lead to other forms of withdrawal (20:519). Intentions still have the strongest relationship to turnover behavior. This relationship was only attenuated by impulsive behavior. The relationship between intentions and turnover "should be stronger the more specific the intention statement and the closer in time the measurement of intention to the behavior [20:517]."

Some researchers feel that intent is part of commitment to the organization and that commitment is the most important variable in predicting turnover. This premise is supported by a study (21) where Charles W. Mueller of the University of Iowa and James L. Price sampled 1,091 nonsupervisory registered nurses using a two-step longitudinal design. The first step involved completion of a questionnaire in August 1976, while the second step was the determination of which nurses had left the hospitals as of 1 October 1977. Only the 211 voluntary separations were included in the study, which proposed a causal model of turnover (Figure 4) and suggested that intent to stay was most influenced by job satisfaction (positive relationship). Intent also appeared to be significantly influenced by level of

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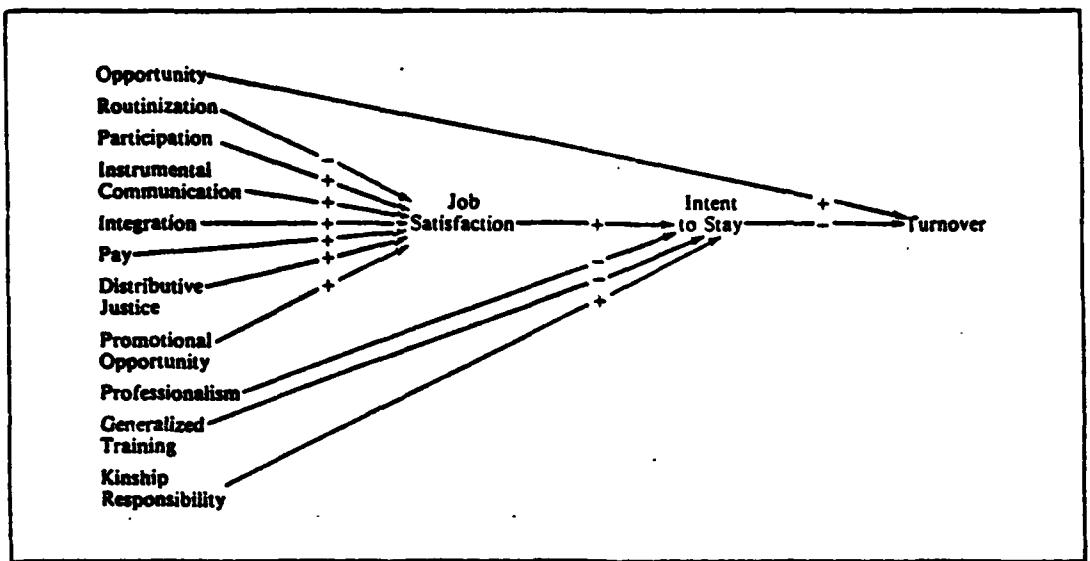
Figure 4. Mueller and Price Turnover Model

education (negative), kinship responsibilities (positive), pay (positive), opportunity to find another job (negative), and promotional opportunities (positive). Mueller and Price concluded that "the importance of intent to stay, rather than job satisfaction, as an intervening variable is demonstrated [21:557]." They further stated that:

> the importance of intent to stay in the model is not just its significance as an intervening variable . . . it contributes significantly to the explained variation in turnover . . . excluding intent to stay from the model results in concluding that job satisfaction is more important than it actually is [21:557].

Mueller and Price also concluded that intent to stay is really a part of commitment.

In 1982, Charles E. Michaels and Paul E. Spector published a study of 112 permanent employees of a community mental health center (16). The study was intended to be a test of Mobley's Conceptual Model. The

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employees were given questionnaires that measured intention to quit, perceived alternative employment, organizational commitment, job satisfaction, personal characteristics, and leadership characteristics. Six months after the survey, turnover statistics were matched with the questionnaire data. A path analysis was conducted to test the model using a multiple regression routine. They concluded that "Overall these results were supportive of the model, although they support some modifications [16:56]." The study showed a strong correlation between intention to quit and turnover (R = .47), yet it also suggested that perceived alternative employment opportunities significantly contributed to turnover. They recommended that organizational commitment be added to the model as a predictor of intention to quit. Michaels and Spector did not agree with Mueller and Price that intent was a part of commitment. However, they did agree that these constructs overlapped.

## Military-Related Studies

During 1969, AFHRL completed a seven year study of career intentions among a sample of 5,600 USAF junior officers (32). Attitudinal surveys were administered during 1963 and 1964, before the officers entered active duty. For each of the three years following commissioning as second lieutenants, they were resurveyed with similar attitudinal measures.

Data were compiled for the year before commissioning through the third year of active duty, and a final analysis was made using military records to determine if the individuals were retained. In addition to

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career intent measures, the survey measured the importance placed on job characteristics.

> Factors considered most important centered around job
> satisfaction - such as working under competent supervisors,
> having a sense of accomplishment, and having the opportunity
> for advancement were determined most important. Least
> important values were represented by such factors as early
> retirement, travel and having a definite work schedule. In
> general, the perceived importance of a reward or working
> condition in the Air Force showed little relationship to the
> perceived possibility of achieving that factor. In fact,
> the greater the discrepancy between the importance and
> possibility of given factors, the more likely a subject was
> to have an unfavorable attitude [32:v].

The researcher, Faye Shenk, noted that career intent remained relatively stable among subjects who indicated they definitely were or were not career-minded, changes occurred primarily among the initially undecided group, and expressed career intent closely matched later records of retention behavior.

> The yearly responses to the career-intent statement indicate
> a decline in career intent through the first few years of
> military service. Job characteristics considered most
> important and attainable were also examined. Factors
> considered most important centered around job satisfaction -
> such as working under competent supervisors, having a sense
> of accomplishment, and having the opportunity for
> advancement. Least important values were represented by
> such factors as early retirement, travel, and having a
> definite work schedule [32:v].

In general, she noted that the perceived importance of a reward or working condition showed little relationship to the perceived possibility of achieving that factor; but the greater the discrepancy between the importance and possibility of given factors, the more the officers were likely to have an unfavorable career intent attitude.

Data analysis indicated that Officer Candidate School (OCS) and Officer Training School-Airman Education and Commissioning Program

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(OTS-AECP) graduates were the most favorable sources for retention, and that 80% of those subjects consistently expressed a definite or most likely career intent. Shenk conjectured that:

> Since officers from both these sources have had prior military service, it is probable that they would not have entered the commissioning program without a high degree of career intent. The fact that officers from these commissioning sources have served as enlisted men suggests that total time invested in the military service may be a potent factor in the career decision [32:2].

A 1971 AFHRL study of USAF officer retainability (33) reexamined demographic, sociological, and attitudinal data collected in 1964 from approximately 5,000 officers with less than 84 months of service. Survey data from 1964 were matched and compared with 1968 active duty and loss files. From the final sample of about 4,000, chi-square tests were performed for each survey question, and significant selected items were identified. Frequency and percentage distributions for career and noncareer officer groups for the total sample were obtained for these selected survey items, and correlations were examined to determine the reliability of original career intent statements and career status.

The retention rate had been 65%. Retention rate variance between types and sources of commission and aeronautical ratings lent support to then current suppositions that career intent was related to those factors. Of those who originally stated they intended to complete their careers, 89% were still on active duty. Prior enlisted personnel were found to be more career-minded than their non-prior enlisted counterparts. Of the 93% who originally stated negative career intent, only 7% remained on active duty. The OCS source of commission reflected the highest percentage relationship to retainability. Among

other items, the survey asked respondents to select five positive and five negative factors about career intent. The two highest ranking positive items were education opportunities and job satisfaction, followed by travel opportunities, responsibility and leadership of being an officer, and challenging work. The highest ranking negative items we. a family isolation, isolated tours, insufficient money, inadequate living quarters, and better civilian employment alternatives.

To help a manager relate job satisfaction and turnover, T. J. Atchison and E. A. Lefferts of San Diego State University examined three questions in a turnover study documented in a 1972 Personnel Psychology article (2).

> Does today's satisfaction lead to tomorrow's turnover? Is turnover related to general levels of job satisfaction? Are there patterns of job dissatisfaction which are more likely to create turnover than others [2:53]?

They preferred Herzberg data collection techniques because that approach emphasized performance instead of turnover. Additionally, they expected that data analysis would imply that attitudes toward a job would be a major variable influencing the decision to participate or not participate.

A group of Air Force pilots was chosen for this study because of researcher interest and because the USAF was then experiencing a pilot retention crisis. The study followed up a 1966 USAF officer motivational study (NEW VIEW) which had sampled 428 officers from a total population of 15,772 having two to five years of service. The Atchison and Lefferts study followed up three years later, divided the

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original sample group into those who had stayed and those who had left, and interviewed the original respondents.

The original study had used Herzberg interview techniques to measure group motivation and hygiene factors, a job reaction survey questionnaire with Likert-type scales to measure 16 features about the job (most of which were Herzberg motivator factors), and a McClelland projective technique to obtain 'need for achievement' scores. The latter element was only partially used. Follow-up research compared 1966 job satisfaction measures with 1969 retention records to determine which satisfaction measures would have predicted actual exits.

Quantitatively, they discovered that the USAF could have accurately predicted who would leave based only on answers to one job reaction question about how often the individual thought about changing jobs. Qualitative measurement, using Herzberg techniques of rating positive to negative factors of job appreciation, showed no significant difference between pilots who stayed or left. However, qualitative measurements did identify some distinctions when subjects were asked how the positive and negative events influenced their performance and career intentions. Positive events were related to positive feelings of performance, while negative events were related to career intentions to leave the USAF. Retention data supported these results. As a result, study findings indicated that Herzberg's positive events are a reflection of the decision to produce, while negative events are related to the decision to participate.

AFHRL's bibliography on turnover literature mentioned several recent studies dealing with past, current, and projected military

retirement characteristics as a function of present retirement benefits and proposed future changes. Two related Rand Corporation studies by Glen Gotz and John McCall (10, 11) were specifically concerned with prediction of USAF officer turnover decisions. They claimed that their efforts were unique because their analysis contained USAF officer promotion probabilities, pay, allowance, and retirement benefit data.

Although they acknowledged that many factors could influence turnover decisions, their approach concentrated on the financial incentives an individual officer faces during consideration of options to voluntarily separate or retire. Their research was divided into three stages. The first stage was to develop a model of sequential decisions an individual officer might follow to select the best timing for exit. The second stage was to develop a generalized model to account for heterogeneity in tastes, opportunities, and transient factors that could disturb retention decisions. The third stage was to use the generalized model to statistically estimate implications of various policy alternatives. This literature review is only concerned with stage one of their research.

Their analysis began with a straightforward assumption that officers were risk indifferent, in that USAF officers choose to quit or stay solely on which choice maximizes the expected present value of future income. They developed a model that calculated the optimum financial return for 26 combinations of voluntary and involuntary separation or retirement at different grades, time in service, and regular versus reserve status. Post retirement civilian pay and military base pay relationships were then introduced to project

theoretically optimum financial exit points. Their model assumed that
at each year of service, an officer evaluates the expected value of
future income and chooses to quit or stay, and that the current
retirement benefits prevailed. They then compared historical decision
data to what their model would have predicted.

Some of their findings seemed intuitive. For instance, their
model suggested it would be highly unlikely that a major with 19 years
of service and eligible to retire in one year would voluntarily choose
to separate in lieu of waiting a year to realize retirement benefits.
However, their model did closely approximate the historical behavior of
retirement decisions that are less intuitively obvious.

> Given the rather stringent assumptions imposed on the
> dynamic programming model [they were able] to closely
> approximate the behavior of the median officer. When the
> incentives to retire are examined it is found that the
> existing retirement system does not provide strong
> incentives for staying in the military beyond twenty years
> of service though the disincentives are not great either.
> These results are sensitive only to extremely large changes
> in civilian and/or military compensation rates, changes
> unlikely except under a radical modification of the
> military compensation system [10:17].

## Summary

There are many non-military studies of turnover, its correlates
and determinants, and the turnover decision process. Intention to quit
has a stronger relationship to turnover than any other element of the
turnover decision process. Expressed intent to quit is the element
that connects a turnover decision to job satisfaction, attraction and
expected utility of the present job, and attraction and expected
utility of alternatives.

There are few published military officer turnover studies, fewer

studies about retirement behavior, and no studies were discovered about prior and non-prior enlisted officer retirement characteristics. When longitudinal studies were conducted, they covered only a short period of time, usually less than four years. Most studies were crisis motivated in response to significant changes in basic military policies, such as change to a volunteer force or political suggestions for change to retirement benefits, or specific retention problems, such as a large-scale attrition of pilots.

Each study demonstrated strong recurring relationships between survey measurements of career intent and decisions to remain on active duty, at least through the limited periods addressed by documented studies. Although the process an individual goes through to reach an intent is not clearly evident, varied elements of job satisfaction recurred as the most frequent and statistically predictable indicators of intent to quit or stay.

## III. Research Design and Methodology

### Overview

This chapter discusses details about how the data collection instrument was designed, how the population was selected and divided into subsets of prior and non-prior enlisted officers, and how the sample sizes were determined. Additionally, it outlines how survey generated data were collected, processed, and analyzed to test the research hypotheses.

### Data Collection

Instrument. A survey questionnaire (Appendix A) was developed to collect data for this research effort. The questionnaire approach was used because preliminary research found no other source of data readily available to address our research problem. Various instruments have frequently measured demographics, job satisfaction, and retention intents. However, none were found that differentiated between prior and non-prior enlisted officers and concentrated specifically on retirement intents. The 1983 USAF Career Survey (6) was the first instrument that collected data that could be differentiated based on prior or non-prior enlisted officer status. However, that instrument did not collect data on retirement intent. The 1983 USAF Career Survey; the current USAF Exit Survey (7); and several conversations with the Air Force Military Personnel Center (AFMPC) officer analysis section (30) were used as references to help develop the survey instrument used in this thesis.

The instrument consisted of 39 questions designed to collect the following type of data: demographic items (questions 1 - 14), job

satisfaction (questions 15 - 23), and retirement intents and/or rationales (questions 24 - 39). Several survey questions were designed to cross-check data consistency. For example, comparison of responses to survey questions 7 and 8 were designed to verify that each respondent was part of the desired population sample.

The instrument was administered to twelve test subjects and evaluated by four faculty members who had experience with attitudinal survey techniques. Their recommendations were incorporated into a questionnaire later approved by HQ AFMPC/MPCYPS (Personnel Survey Branch) through survey control number 84-46.

The use of many questions similar to other USAF surveys combined with limited survey pretests to help develop subjective confidence about the usefulness of this instrument. However, the reliability or validity of this new instrument was not established. The concept of reliability pertains to an instrument's ability to provide consistent results, and reliability is a critical component for the concept of internal and external validity. Internal validity pertains to an instrument's ability to measure what it is purported to measure, and external validity concerns the extent of generalizability about findings based on survey generated data (8:128).

Population. The survey population included personnel with the following combination of attributes:

a. Officers soon or currently eligible for officer retirement; specifically officers with 17 or more years of total active federal military service (TAFMS) and more than seven years total active federal commission service (TAFCS).

b.  Officers performing duty in logistics career fields, specifically officers with duty Air Force specialty codes (AFSCs) 004X, 009X, 40XX, 60XX, 64XX, 65XX, and 66XX.

To identify the above population and its two subsets of prior and non-prior enlisted officers, two searches were processed through the USAF ATLAS data base, a computerized personnel data retrieval system. The specific approach used was not straightforward because ATLAS data could not directly identify prior or non-prior enlisted officers.

The following logic guided our data request.  Both searches requested captains through colonels having the above mentioned AFSCs. One search was for officers with identical TAFMS/TAFCS dates before 1 January 1968, which resulted in a listing initially considered as the population subset of non-prior enlisted officers.  Another search was for officers with differing TAFMS/TAFCS dates, where TAFMS was prior to 1 January 1968 and TAFCS was before 1 January 1978.  This listing was initially considered as the population subset of prior enlisted officers.  The two ATLAS inquiries identified a population size of 3,256 officers.

Determination of specific population subset sizes required interpretation of the ATLAS data.  Although the list of officers with identical TAFMS/TAFCS dates was assured of having no enlisted service, officers with differing TAFMS/TAFCS dates could also have had no enlisted service.  For example, an officer that participated in and graduated from an aviation cadet commissioning program could have a TAFMS date earlier than the TAFCS date, yet have no enlisted service. Therefore, the ATLAS listing of officers with differing TAFMS/TAFCS

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dates could not exclusively represent the subset of prior enlisted officers.

Since there was no foolproof procedure to clearly identify non-prior enlisted officers with differing TAFMS/TAFCS dates, the following logic was applied in an attempt to filter ATLAS data and deduce approximate population subset sizes. An expected 12 months or less of aviation cadet service time was established based on an estimation of the time required for pilot training. ATLAS data identified 1,880 officers with differing TAFMS/TAFCS dates. When ATLAS data identified officers with TAFMS/TAFCS dates varying by 12 months or less, these personnel were interpreted as potential non-prior enlisted officers. Following the above evaluations of ATLAS data, population subset estimates of 728 prior and 2,528 non-prior enlisted officers were derived.

Sample. The sample size for prior and non-prior enlisted population subsets was designed for a confidence level of 95% ± 5%. The formula below (5:11-14) was used to identify how many respondents were needed to achieve the desired level of confidence in study results:

$$\text{sample size} = \frac{N(z)^2 \times p(1-p)}{[(N-1) \times (d^2)] + [z^2 \times p(1-p)]}$$

where: N = population size

p = maximum sample size factor (.50)

d = desired tolerance (.05)

z = factor of assurance (1.96) for 95% confidence level

Computations indicated that a minimum of 252 prior and 334 non-prior enlisted respondents were required to achieve the desired level of

statistical confidence. Combination of these minimum numbers would also support the desired confidence level for analysis of combined group responses. A decision was made to mail surveys to 504 officers thought to have prior enlisted service, and 670 non-prior enlisted officers, so that the expected 50% return rate would provide sufficient data to achieve the desired confidence level.

Since the prior enlisted status of officers with TAFMS/TAFCS dates differing by 12 months or less could not be assured, they were restricted from selection for survey mailings. This restriction helped assure subset samples were more likely to include only the type of officers desired. However, this restriction limited the potential of sampling officers with less than one year enlisted service. The effect of not sampling those with such short periods of enlisted service was subjectively judged less adverse than the possibility of sending surveys to individuals lacking the desired background.

Approximately every third unrestricted name was selected for survey mailing. Each selectee's rank, name, AFSC, expected prior or non-prior enlisted background, and duty address data was transcribed to create a separate local data base. Prior to entering address data, ATLAS descriptions of unit addresses were cross-checked and modified to comply with official address descriptions listed in Air Force Regulation 10-4, Air Force Address Directory. The data base was then used to print mailing labels and a personalized letter of transmittal to accompany each survey.

Definitions

Prior Enlisted Officer. An active duty USAF commissioned officer

who had previous active duty enlisted service in any United States armed service.

Non-prior Enlisted Officer. An active duty USAF commissioned officer who has no previous active duty enlisted service in any United States armed service.

Peers. Two individuals with similar demographic characteristics, such as age, marital status, and number of dependents.

Officer Peers. USAF officers of identical grade regardless of prior or non-prior enlisted background.

Officer Retirement. Officer retirement elections may occur throughout the continuum from retirement at the earliest opportunity to mandatory retirement. Essential factors involve the requirement for accrued active military service longevity of at least 20 years, a minimum of 10 years TAFCS for prior enlisted officers, and the absence of additional service commitments. Officer retirement can be voluntary, as when requested by a member; or involuntary, as when required by various USAF personnel policies such as maximum 30 years TAFCS for regular officers. Voluntary or involuntary departures as a function of any other event, such as medical disability, are not included in the definition of retirement used in this study.

Retirement at the Earliest Opportunity. The election to request retirement within one year of satisfying minimum active duty longevity requirements and service commitments.

Mandatory Retirement. The requirement to involuntarily retire as a function of promotion policies, reserve versus regular commission status, maximum active duty commission time in service, and other

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personnel policies. The potential for waivers to mandatory retirement was not considered within the scope of this study.

Nominal. A nominal level of measurement makes no assumptions about the relationship between the values being assigned. Each value defines a distinct category and serves merely as a label or name (hence, 'nominal' level) for the category (24:15).

Ordinal. An ordinal measure exists when "it is possible to rank or order all categories according to some criterion [24:15]." The specific differences between values on the scale are not necessarily equal.

Interval. An interval measure has rank ordering similar to an ordinal scale, but the specific distance between each value is meaningful.

## Data Analysis Overview

Questionnaire data was manually transcribed to create individual data records on a microcomputer. Survey responses were cross-checked for consistency during data transcription, then organized into data bases for prior enlisted, non-prior enlisted, and a combination of both. The data bases were then transferred to a Control Data Corporation Cyber computer where software from the Statistical Package for the Social Sciences (SPSS) (22) was used to analyze and test the research hypotheses.

## SPSS Applications

SPSS is a set of integrated programs designed for statistical data analysis. First introduced in 1969, the SPSS system includes a wide

variety of procedures for statistical analysis and data manipulation. Five procedures were used to analyze survey data.

Frequency Distribution Procedure. The frequency distribution procedure (24:10) provides descriptive statistics and frequency distributions for any type of measure.

Crosstabulation Procedure. Crosstabulation procedures (24:22) produce crosstabulations for each possible combination of responses to two variables. It computes a joint frequency distribution for any two variables, and one may test for dependency between the two variables. The null hypothesis is that the two variables are independent of each other. SPSS produces a chi-square value and an observed significance level. The observed significance level is "the probability of obtaining the observed chi-square results or one more extreme if the two variables are independent [24:27]." If this probability is small (< .05), the hypothesis of independence is rejected and the existence of a statistically significant relationship is indicated.

Kolmogorov-Smirnov (K-S) One-Sample Test Procedure. The K-S One Sample Test determines "whether the observed data could reasonably have come from a theoretical distribution specified by the user [23:224]." This test was specifically used to determine if certain prior and non-prior enlisted responses were normally distributed. Confirmation of normally distributed responses was needed to satisfy assumptions required by follow-on Two-Sample t-test procedures.

Two-Sample T-Test Procedure. The t-test procedure computes "Student's t statistic and probability levels for testing whether or not the difference between two sample means is significant [22:267]." The

t-test can be used with variables measured on an interval scale. The null hypothesis to be tested is that the mean values are the same for the two groups. Using a significance level of .05, the null hypothesis is not rejected and the means are considered equal if the computed t-value is between $\pm$ 1.96, (23:329,887). Use of this test assumes that the sample mean is from a normally distributed population.

Kolmogorov-Smirnov (K-S) Two-Sample Test Procedure. The K-S Two-Sample Test procedure is a nonparametric test to determine the distribution homogeneity between two variables (23:232). The procedure computes the cumulative distribution for each group; the maximum positive, negative, and absolute differences; a K-S Z value; and a probability value. The null hypothesis is that there is no significant difference between the response distribution of each group. If the maximum absolute difference is less than the critical difference, the null hypothesis is not rejected and    distributions are considered to have no significant difference (31:79,380). The following formula is used to manually calculate the critical absolute difference.

$$D_{.05} = 1.36 \times \sqrt{\frac{n_1 + n_2}{n_1 \times n_2}}$$

where: $D_{.05}$ = critical absolute difference

$n_1$ = group 1 sample size

$n_2$ = group 2 sample size

## Hypothesis Testing

Hypothesis One. Except for rank and related military pay, prior

and non-prior enlisted officers are peers in terms of demographic and biographical data.

Testing Procedure. K-S One-Sample tests were used to determine if prior and non-prior enlisted responses to questions 6, 10, and 14 were normally distributed. These test results were used to satisfy normal distribution assumptions required for Two-Sample t-test procedures. T-test procedures were then used to determine if mean responses to these questions were statistically different between prior and non-prior enlisted groups. Additionally, frequency analysis procedures compared median responses for questions 1, 12, and 13. The above mentioned questions are paraphrased below.

1. What is your current active duty grade?

6. How many years TAFMS have you completed?

10. What is your current age?

12. What percentage of your total family income does your spouse earn?

13. What is your highest level of education?

14. How many total dependent children do you have, and how many are in each of five typical school age categories?

Decision Criteria. The hypothesis would be considered supported if prior and non-prior enlisted responses to questions 10 and 14 appeared be normally distributed, and a comparision of mean responses produced t-values between ± 1.96. These results would indicate that these aspects were the same for both groups.

Hypothesis Two. Prior enlisted officers soon or currently eligible for officer retirement have the same retirement intentions as non-prior enlisted officers soon or currently eligible for retirement.

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Testing Procedure. The Kolmogorov-Smirnov (K-S) Two-Sample
Test (23:232) was applied to determine distribution homogeneity between
prior and non-prior enlisted responses to survey question 25: "How soon
after reaching retirement eligibility do you intend to retire?"
Crosstabulation statistics were used to determine if question 25
responses were dependent on prior or non-prior enlisted status.

Decision Criteria. The hypothesis would be considered
supported if the K-S test procedure produces a maximum absolute
difference less than the computed critical difference. Additionally,
the hypothesis would be considered supported if crosstabulation
statistics indicated that retirement intent was independent of prior or
non-prior enlisted status (significance value > .05).

Hypothesis Three. Prior and non-prior enlisted officers view the
potential for increasing financial income or benefits as the primary
factor affecting retirement plans.

Testing Procedure. Crosstabulation statistics were used to
determine if responses to question 37 were dependent on prior or non-
prior enlisted status. Question 37 asked if the potential for
increasing financial income or benefits is or is not the primary factor
affecting retirement plans. Respondents were also given the opportunity
to insert other responses.

Decision Criteria The hypothesis would be considered as
supported if the prior, non-prior, and combined group frequency
distributions of the "is" response exceeded a subjectively established
75%; and if the answer to question 37 was independent of prior or non-
prior enlisted status (a significance value > .05).

# IV.  Survey Results

## Introduction

The number of surveys mailed was based on an anticipated 50%
return rate, which would have provided sufficient data to achieve a
95% confidence level.  When survey returns exceeded the number desired,
survey data entry was ceased to enable adequate time for data analysis.
A recap of survey distribution and returns is shown in Table 1.

### TABLE 1

### Summary of Survey Mailings and Returns

| | SURVEYS MAILED OUT | SURVEYS ACCOUNTED FOR | SURVEYS NOT USED | SURVEYS USED FOR ANALYSIS |
|---|---|---|---|---|
| PRIOR ENLISTED OFFICERS | 504 | 413 | 36 | 377<br>75% |
| NON-PRIOR ENLISTED OFFICERS | 669 | 615 | 131 | 484<br>72% |
| TOTALS and % of TOTAL | 1173 | 1028<br>87% | 167<br>14% | 861<br>73% |

## Hypotheses Test Results

Hypothesis One.  Except for rank and related military pay, prior
and non-prior enlisted officers are peers in terms of demographic and
biographical data.

Test Results.  The K-S One-Sample tests indicated that
question 10 and 14 responses were not normally distributed.  However,
since frequency analysis did show the response distributions to be
mound shaped and approximately normal, t-tests were used (3:298).
These tests showed that the mean responses to questions 10 and 14 were

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the same for the two groups. Specific t-test results are outlined in
Tables 2 and 3. Responses to these questions were also subjected to
K-S Two-Sample test procedures. The K-S tests also indicated that
responses to questions 10 and 14 were homogenous for the two groups,
which further supported the t-test results.

TABLE 2

T-Test of Mean for Age

|  | CASES | MEAN | STD DEV | STD ERR |
|---|---|---|---|---|
| PRIOR | 376 | 43.7553 | 4.620 | .238 |
| NON-PRIOR | 484 | 43.5661 | 3.991 | .181 |

| | | POOLED VARIANCE ESTIMATE | | | SEPARATE VARIANCE ESTIMATE | | |
|---|---|---|---|---|---|---|---|
| F VAL | 2-TAIL PROB | T VAL | DEG OF FREEDOM | 2-TAIL PROB | T VAL | DEG OF FREEDOM | 2-TAIL PROB |
| 1.34 | .003 | 0.64 | 858 | .520 | 0.63 | 742.18 | .528 |

TABLE 3

T-Test of Mean for Number of Dependent Children

|  | CASES | MEAN | STD DEV | STD ERR |
|---|---|---|---|---|
| PRIOR | 372 | 1.9409 | 1.117 | .058 |
| NON-PRIOR | 479 | 2.0000 | 1.146 | .052 |

| | | POOLED VARIANCE ESTIMATE | | | SEPARATE VARIANCE ESTIMATE | | |
|---|---|---|---|---|---|---|---|
| F VAL | 2-TAIL PROB | T VAL | DEG OF FREEDOM | 2-TAIL PROB | T VAL | DEG OF FREEDOM | 2-TAIL PROB |
| 1.05 | .598 | -0.76 | 849 | .450 | -0.76 | 807.09 | .449 |

Analysis reflected that median responses to questions 12 (percent
of family income contributed by spouse) and question 13 (education
level of respondent) were also the same for the two subgroups.
Detailed frequency test results are outlined in Tables 4 and 5.

TABLE 4

Frequency Analysis of Question 12 Responses.
What percentage of your total family income does your spouse earn?

| | | PRIOR ENLISTED | | NON-PRIOR ENLISTED | | COMBINATION | |
| | | NUMBER OF RESPONSES | ADJUSTED FREQUENCY | NUMBER OF RESPONSES | ADJUSTED FREQUENCY | NUMBER OF RESPONSES | ADJUSTED FREQUENCY |
|---|---|---|---|---|---|---|---|
| NA NOT MARRIED | : | 24 | 6.4% | 16 | 3.3% | 40 | 4.7% |
| NA NOT WORKING | : | 200 | 53.3% | 259 | 53.7% | 459 | 53.6% |
| 10% OR LESS | : | 40 | 10.7% | 73 | 15.1% | 113 | 13.2% |
| 11-20% | : | 36 | 9.6% | 58 | 12.0% | 94 | 11.0% |
| 21-30% | : | 32 | 8.5% | 43 | 8.9% | 75 | 8.8% |
| 31-40% | : | 33 | 8.8% | 21 | 4.4% | 54 | 6.3% |
| 41-50% | : | 8 | 2.1% | 11 | 2.3% | 19 | 2.2% |
| 51% OR MORE | : | 2 | .5% | 1 | .2% | 3 | .4% |
| MISSING | : | 2 | | 2 | | 4 | |
| TOTAL | : | 377 | 100.0% | 484 | 100.0% | 861 | 100.0% |

TABLE 5

Frequency Analysis of Question 13 Responses.
What is your highest level of education?

| | | PRIOR ENLISTED | | NON-PRIOR ENLISTED | | COMBINATION | |
| | | NUMBER OF RESPONSES | ADJUSTED FREQUENCY | NUMBER OF RESPONSES | ADJUSTED FREQUENCY | NUMBER OF RESPONSES | ADJUSTED FREQUENCY |
|---|---|---|---|---|---|---|---|
| HIGH SCHOOL | : | 7 | 1.9% | 0 | 0% | 7 | .8% |
| UNDERGRAD DEGREE: | | 54 | 14.4% | 81 | 16.7% | 135 | 15.7% |
| GRAD WK/NO MAST | : | 55 | 14.6% | 34 | 7.0% | 89 | 10.3% |
| MASTERS DEGREE | : | 227 | 60.4% | 331 | 68.4% | 558 | 64.9% |
| POSTGRAD WORK | : | 26 | 6.9% | 35 | 7.2% | 61 | 7.1% |
| PHD | : | 2 | .5% | 3 | .6% | 5 | .6% |
| OTHER | : | 5 | 1.3% | 0 | 0% | 5 | .6% |
| MISSING | : | 1 | | 0 | 0% | 1 | |
| TOTAL | : | 377 | 100.0% | 484 | 100.0% | 861 | 100.0% |

Question 6 responses about TAFMS were not normally distributed for either group, so t-tests could not be applied. K-S Two-Sample tests showed that responses were not homogenous and the groups were different in this respect. Additionally, frequency distribution analysis showed that rank structures differed between the two groups (Table 6).

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# TABLE 6

### Frequency Analysis of Question 1 Responses.
### What is your current active duty grade?

| | | PRIOR ENLISTED | | NON-PRIOR ENLISTED | | COMBINATION | |
|---|---|---|---|---|---|---|---|
| | | NUMBER OF RESPONSES | ADJUSTED FREQUENCY | NUMBER OF RESPONSES | ADJUSTED FREQUENCY | NUMBER OF RESPONSES | ADJUSTED FREQUENCY |
| CAPTAIN | : | 120 | 31.9% | 3 | .6% | 123 | 14.3% |
| MAJOR | : | 101 | 26.9% | 81 | 16.7% | 182 | 21.2% |
| LT COL | : | 76 | 20.2% | 215 | 44.4% | 291 | 33.8% |
| COLONEL | : | 79 | 21.0% | 185 | 38.2% | 264 | 30.7% |
| MISSING | : | 1 | | 0 | 0% | 1 | |
| TOTALS | : | 377 | 100.0% | 484 | 100.0% | 861 | 100.0% |

Other data analysis related to this hypothesis showed similarities in the frequency distributions for marital status; assignment location (CONUS versus overseas); the number of dependent children in preschool, junior high school, and senior high school; and responses to questions measuring satisfaction. The groups were not similar in terms of the number of dependent children in elementary school and in college. Also, a slightly higher percent of the prior enlisted officers were assigned to wing level (28.3% versus 21.7%) while a higher percent of the non-prior enlisted officers were assigned to the HQ/MAJCOM/SOA level (29.6% versus 31.6%).

Hypothesis Two. Prior enlisted officers soon or currently eligible for officer retirement have the same retirement intentions as non-prior enlisted officers soon or currently eligible for retirement.

Test Results. The K-S Two-Sample Test results for question 25 indicated that responses were homogenous for those officers who had decided when, after reaching eligibility, they intended to retire. Many respondents, 47.4% of prior and 42.9% of non-prior enlisted

officers, indicated that they had not yet decided on how soon after
eligibility they intended to retire. A summary of K-S Two-Sample Test
results is outlined in Table 7.

TABLE 7

K-S Two-Sample Test of When Intending to Retire
by Prior or Non-Prior Enlisted Background

| N-PRIOR GROUP | PRIOR GROUP | MAXIMUM ABS DIFF | MAXIMUM + DIFF | MAXIMUM – DIFF |
|---|---|---|---|---|
| 274 | 195 | .0386 | .0386 | 0 |

| CALCULATED CRITICAL D | K-S Z VALUE | 2-TAILED PROBABILITY |
|---|---|---|
| .1274 | .413 | .996 |

The frequency distribution of question 25 responses is shown
in Table 8. Frequency analysis of question 25 responses indicated that
a higher percentage of non-prior enlisted officers intended to retire
during the first year of eligibility. However, the chi-square value
shows that question 25 responses were independent of prior or non-prior
enlisted status (Table 9). Additionally, for prior enlisted officers,
there was no relationship between their expressed intent to retire
after eligibility and length of enlisted service (Table 10).

Other analyses indicated that retirement intent after eligibility
was related to TAFMS (Table 11), rank (Table 12), satisfaction with
current overall USAF life (Table 13), current job satisfaction,
satisfaction with perceived promotion opportunity, satisfaction with
military pay and allowances, expected satisfaction with USAF life

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(overall) one year in the future, and an estimate of dependents'

current satisfaction with USAF life.

## TABLE 8

Frequency Analysis Question 25 Responses.
How soon after reaching retirement eligibility do you intend to retire?

|  | PRIOR ENLISTED | | NON-PRIOR ENLISTED | | COMBINATION | |
|---|---|---|---|---|---|---|
|  | NUMBER OF RESPONSES | ADJUSTED FREQUENCY | NUMBER OF RESPONSES | ADJUSTED FREQUENCY | NUMBER OF RESPONSES | ADJUSTED FREQUENCY |
| 0-1 YR FROM ELIG : | 80 | 21.6% | 123 | 25.6% | 203 | 23.9% |
| 1-2 YRS FROM ELIG: | 16 | 4.3% | 18 | 3.7% | 34 | 4.0% |
| 2-3 YRS FROM ELIG: | 13 | 3.5% | 14 | 2.9% | 27 | 3.2% |
| 3-4 YRS FROM ELIG: | 12 | 3.2% | 16 | 3.3% | 28 | 3.3% |
| 4+ YRS FROM ELIG : | 74 | 19.9% | 103 | 21.5% | 177 | 20.8% |
| UNDECIDED : | 176 | 47.4% | 206 | 42.9% | 382 | 44.9% |
| MISSING : | 6 | | 4 | | 10 | |
| TOTAL : | 377 | 100.0% | 484 | 100.0% | 861 | 100.0% |

## TABLE 9

Crosstabulation of When Intending to Retire by Enlisted Background

|  | PRIOR ENLISTED | N-PRIOR ENLISTED | ROW TOTAL |
|---|---|---|---|
| RET < 1 YR AFTER ELIG | 80 21.2% | 123 25.4% | 203 23.6% |
| RET 1-2 YRS AFTER ELIG | 16 4.2% | 18 3.7% | 34 3.9% |
| RET 2-3 YRS AFTER ELIG | 13 3.4% | 14 2.9% | 27 3.1% |
| RET 3-4 YRS AFTER ELIG | 12 3.2% | 16 3.3% | 28 3.3% |
| RET > 4 YRS AFTER ELIG | 74 19.6% | 103 21.3% | 177 20.6% |
| UNDECIDED | 176 46.7% | 206 42.6% | 382 44.4% |
| UNUSABLE RESPONSES | 6 1.6% | 4 .8% | 10 1.2% |
| COLUMN TOTAL | 377 43.8% | 484 56.2% | 861 100.0% |

Raw chi-sq = 4.10804, with 6 Degrees of Freedom, Significance = .6621

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TABLE 10

Crosstabulation of When Intending to Retire by Years of Enlisted Service

| | NON-PRIOR | < 1 YR PRIOR SERVICE | 1-5 YRS PRIOR SERVICE | 5-8 YRS PRIOR SERVICE | 8-11 YRS PRIOR SERVICE | > 11 YRS PRIOR SERVICE | ROW TOTAL |
|---|---|---|---|---|---|---|---|
| RET < 1 YR AFTER ELIG | 123 | 0 | 20 | 17 | 17 | 26 | 203 |
| | 25.4% | 0% | 15.5% | 24.6% | 21.0% | 27.1% | 23.6% |
| RET 1-2 YRS AFTER ELIG | 18 | 0 | 8 | 3 | 3 | 2 | 34 |
| | 3.7% | 0% | 6.2% | 4.3% | 3.7% | 2.1% | 3.9% |
| RET 2-3 YRS AFTER ELIG | 14 | 0 | 3 | 4 | 4 | 2 | 27 |
| | 2.9% | 0% | 2.3% | 5.8% | 4.9% | 2.1% | 3.1% |
| RET 3-4 YRS AFTER ELIG | 16 | 0 | 5 | 3 | 3 | 1 | 28 |
| | 3.3% | 0% | 3.9% | 4.3% | 3.7% | 1.0% | 3.3% |
| RET > 4 YRS AFTER ELIG | 103 | 1 | 37 | 11 | 16 | 9 | 177 |
| | 21.3% | 50.0% | 28.7% | 15.9% | 19.8% | 9.4% | 20.6% |
| UNDECIDED | 206 | 1 | 54 | 31 | 36 | 54 | 382 |
| | 42.6% | 50.0% | 41.9% | 44.9% | 44.4% | 56.3% | 44.4% |
| UNUSABLE RESPONSES | 4 | 0 | 2 | 0 | 2 | 2 | 10 |
| | .8% | 0% | 1.6% | 0% | 2.5% | 2.1% | 1.2% |
| COLUMN TOTAL | 484 | 2 | 129 | 69 | 81 | 96 | 861 |
| | 56.2% | .2% | 15.0% | 8.0% | 9.4% | 11.1% | 100.0% |

Raw chi-sq = 31.97058 with 30 Degrees of Freedom; Significance = .3689

TABLE 11

Crosstabulation of When Intending to Retire by TAFMS

| | 17 YRS TAFMS | 18 YRS TAFMS | 19 YRS TAFMS | 20 YRS TAFMS | 21 YRS TAFMS | 22 YRS TAFMS | 23 YRS TAFMS | 24 YRS TAFMS | 25 YRS TAFMS | 26 YRS TAFMS | ROW TOTAL |
|---|---|---|---|---|---|---|---|---|---|---|---|
| RET < 1 YR AFTER ELIG | 63 | 35 | 28 | 18 | 8 | 17 | 10 | 5 | 5 | 14 | 203 |
| | 41.2% | 34.3% | 38.9% | 28.1% | 19.0% | 23.6% | 16.9% | 10.0% | 10.0% | 7.1% | 23.6% |
| RET 1-2 YRS AFTER ELIG | 8 | 4 | 5 | 4 | 1 | 3 | 2 | 0 | 2 | 5 | 34 |
| | 5.2% | 3.9% | 6.9% | 6.3% | 2.4% | 4.2% | 3.4% | 0% | 4.0% | 2.5% | 3.9% |
| RET 2-3 YRS AFTER ELIG | 4 | 5 | 2 | 0 | 3 | 1 | 4 | 2 | 4 | 2 | 27 |
| | 2.6% | 4.9% | 2.8% | 0% | 7.1% | 1.4% | 6.8% | 4.0% | 8.0% | 1.0% | 3.1% |
| RET 3-4 YRS AFTER ELIG | 5 | 3 | 2 | 3 | 3 | 4 | 5 | 0 | 0 | 3 | 28 |
| | 3.3% | 2.9% | 2.8% | 4.7% | 7.1% | 5.6% | 8.5% | 0% | 0% | 1.5% | 3.3% |
| RET > 4 YRS AFTER ELIG | 13 | 7 | 10 | 10 | 2 | 10 | 10 | 14 | 11 | 90 | 177 |
| | 8.5% | 6.9% | 13.9% | 15.6% | 4.8% | 13.9% | 16.9% | 28.0% | 22.0% | 45.7% | 20.6% |
| UNDECIDED | 60 | 48 | 25 | 29 | 25 | 35 | 28 | 28 | 27 | 77 | 382 |
| | 39.2% | 47.1% | 34.7% | 45.3% | 59.5% | 48.6% | 47.5% | 56.0% | 54.0% | 39.1% | 44.4% |
| UNUSABLE RESPONSES | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 1 | 6 | 10 |
| | 0% | 0% | 0% | 0% | 0% | 2.8% | 0% | 2.0% | 2.0% | 3.0% | 1.2% |
| COLUMN TOTAL | 153 | 102 | 72 | 64 | 42 | 72 | 59 | 50 | 50 | 197 | 861 |
| | 17.8% | 11.8% | 8.4% | 7.4% | 4.9% | 8.4% | 6.9% | 5.8% | 5.8% | 22.9% | 100.0% |

TABLE 12

Crosstabulation of When Intending to Retire by Rank

| | CAPT | MAJ | LT COL | COL | UNK | ROW TOTAL |
|---|---|---|---|---|---|---|
| RET < 1 YR AFTER ELIG | 46 <br> 37.4% | 87 <br> 47.8% | 48 <br> 16.5% | 21 <br> 8.0% | 1 <br> 100.0% | 203 <br> 23.6% |
| RET 1-2 YRS AFTER ELIG | 3 <br> 2.4% | 14 <br> 7.7% | 13 <br> 4.5% | 4 <br> 1.5% | 0 <br> 0% | 34 <br> 3.9% |
| RET 2-3 YRS AFTER ELIG | 8 <br> 6.5% | 3 <br> 1.6% | 3 <br> 1.0% | 13 <br> 4.9% | 0 <br> 0% | 27 <br> 3.1% |
| RET 3-4 YRS AFTER ELIG | 2 <br> 1.6% | 7 <br> 3.8% | 11 <br> 3.8% | 8 <br> 3.0% | 0 <br> 0% | 28 <br> 3.3% |
| RET > 4 YRS AFTER ELIG | 12 <br> 9.8% | 16 <br> 8.8% | 51 <br> 17.5% | 98 <br> 37.1% | 0 <br> 0% | 177 <br> 20.6% |
| UNDECIDED | 51 <br> 41.5% | 53 <br> 29.1% | 162 <br> 55.7% | 116 <br> 43.9% | 0 <br> 0% | 382 <br> 44.4% |
| UNUSABLE RESPONSES | 1 <br> .8% | 2 <br> 1.1% | 3 <br> 1.0% | 4 <br> 1.5% | 0 <br> 0% | 10 <br> 1.2% |
| COLUMN TOTAL | 123 <br> 14.3% | 182 <br> 21.1% | 291 <br> 33.8% | 264 <br> 30.7% | 1 <br> .1% | 861 <br> 100.0% |

Raw chi-sq = 191.77192 with 24 Degrees of Freedom, Significance = .0000

TABLE 13

Crosstabulation of When Intending to Retire by Satisfaction with the USAF

| | VERY DISSAT w/USAF | MODERATE DISSAT SERVICE | NEITHER SAT or DISSAT | MODERATE SAT w/USAF | VERY SAT w/USAF | NO RESPONSE | ROW TOTAL |
|---|---|---|---|---|---|---|---|
| RET < 1 YR AFTER ELIG | 11 <br> 78.6% | 41 <br> 67.2% | 20 <br> 60.6% | 78 <br> 22.7% | 53 <br> 13.0% | 0 <br> 0% | 203 <br> 23.6% |
| RET 1-2 YRS AFTER ELIG | 1 <br> 7.1% | 1 <br> 1.6% | 2 <br> 6.1% | 20 <br> 5.8% | 10 <br> 2.4% | 0 <br> 0% | 34 <br> 3.9% |
| RET 2-3 YRS AFTER ELIG | 0 <br> 0% | 0 <br> 0% | 0 <br> 0% | 14 <br> 4.1% | 12 <br> 2.9% | 1 <br> 100.0% | 27 <br> 3.1% |
| RET 3-4 YRS AFTER ELIG | 0 <br> 0% | 1 <br> 1.6% | 0 <br> 0% | 16 <br> 4.7% | 11 <br> 2.7% | 0 <br> 0% | 28 <br> 3.3% |
| RET > 4 YRS AFTER ELIG | 1 <br> 7.1% | 2 <br> 3.3% | 2 <br> 6.1% | 52 <br> 15.2% | 120 <br> 29.3% | 0 <br> 0% | 177 <br> 20.6% |
| UNDECIDED | 1 <br> 7.1% | 15 <br> 24.6% | 9 <br> 27.3% | 160 <br> 46.6% | 197 <br> 48.2% | 0 <br> 0% | 382 <br> 44.4% |
| UNUSABLE RESPONSES | 0 <br> 0% | 1 <br> 1.6% | 0 <br> 0% | 3 <br> .9% | 6 <br> 1.5% | 0 <br> 0% | 10 <br> 1.2% |
| COLUMN TOTAL | 14 <br> 1.6% | 61 <br> 7.1% | 33 <br> 3.8% | 343 <br> 39.8% | 409 <br> 47.5% | 1 <br> .1% | 861 <br> 100.0% |

Raw chi-sq = 201.43629 with 30 Degrees of Freedom, Significance = .0000

Hypothesis Three. Prior and non-prior enlisted officers view the
potential for increasing financial income or benefits as the primary
factor affecting retirement plans.

Test Results. Crosstabulation statistics indicated that
responses to question 37 were independent of rank (.3119), TAFMS
(.4885), prior enlisted status (.0975), age (.9028), marital status
(.9633), percent of family income earned by the respondents spouse
(.9736), and the level of education (.9049). The responses were
dependent on the total number of dependent children (Table 14).

Most respondents (64.9%) indicated, through their responses to
question 37, that the potential for increasing financial income or
benefits was not the primary factor affecting retirement plans. Table
15 shows the frequency distribution for answers to question 37.

TABLE 14

Crosstabulation of Perceived Potential for
Financial Improvement as a Prime Factor of Retirement
by Number of Dependent Children

| | NUMBER OF DEPENDENT CHILDREN | | | | | | | | |
| | NONE | 1 | 2 | 3 | 4 | 5 | 6 | UNK | TOTAL |
|---|---|---|---|---|---|---|---|---|---|
| PRIME FACTOR | 24 | 55 | 112 | 64 | 22 | 5 | 1 | 3 | 286 |
| | 25.5% | 33.5% | 31.9% | 36.8% | 43.1% | 35.7% | 33.3% | 30.0% | 33.2% |
| NOT PRIME FACTOR | 64 | 109 | 233 | 108 | 27 | 9 | 2 | 7 | 559 |
| | 68.1% | 66.5% | 66.4% | 62.1% | 52.9% | 64.3% | 66.7% | 70.0% | 64.9% |
| OTHER RESPONSE | 6 | 0 | 6 | 2 | 0 | 0 | 0 | 0 | 14 |
| | 6.4% | 0% | 1.7% | 1.1% | 0% | 0% | 0% | 0% | 1.6% |
| NO RESPONSE | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 2 |
| | 0% | 0% | 0% | 0% | 3.9% | 0% | 0% | 0% | .2% |
| COLUMN TOTALS | 94 | 164 | 351 | 174 | 51 | 14 | 3 | 10 | 861 |
| | 10.9% | 19.0% | 40.8% | 20.2% | 5.9% | 1.6% | .3% | 1.2% | 100.0% |

Raw chi-sq = 54.83837 with 21 Degrees of Freedom, Significance = .0001

TABLE 15

Frequency Analysis of Question 37 Responses.
Potential for increasing financial income or benefits is or is not
the primary factor affecting my present or future retirement plans.

| | PRIOR ENLISTED | | NON-PRIOR ENLISTED | | COMBINATION | |
| | NUMBER OF RESPONSES | ADJUSTED FREQUENCY | NUMBER OF RESPONSES | ADJUSTED FREQUENCY | NUMBER OF RESPONSES | ADJUSTED FREQUENCY |
|---|---|---|---|---|---|---|
| $ PRIME FACTOR : | 135 | 35.8% | 151 | 31.3% | 286 | 33.3% |
| NOT PRIME FACTOR: | 233 | 61.8% | 326 | 67.6% | 559 | 65.1% |
| OTHER ANSWER : | 9 | 2.4% | 5 | 1.0% | 14 | 1.6% |
| NO ANSWER : | | | 2 | 0% | 2 | 0% |
| TOTAL : | 377 | 100.0% | 484 | 100.0% | 861 | 100.0% |

## Other Analysis

Question 34 asked if retirement plans would vary if selected for

promotion. Over half of the combined group (51.8%) said they would

delay retirement at least long enough to retire at the higher rank.

Chi-square tests indicated that response to this question was

independent of prior or non-prior enlisted background. However, a

lesser percent of prior than non-prior enlisted officers (46.7% vs

55.8%) indicated that promotion would delay retirement plans.

A satistically dependent relationship was evident between the answer

to this question and the respondent's rank. The higher the

respondent's rank, the more likely promotion would delay retirement.

Question 36 inquired if USAF personnel policies encouraged

retirement at the earliest opportunity. This question was

intentionally open-ended because the term personnel policies was not

defined and could encompass many different perceptions. Responses from

the 861 officers surveyed were almost evenly divided: 42% agreed and

46.6% disagreed. Responses to this question were found to be

independent of prior or non-prior enlisted background, but were found

to be dependent on rank, TAFMS, and age. As rank, TAFMS, and age

increased, the less likely that personnel policies were felt to

encourage early retirement. Write-in responses frequently related

personnel policies to assignment selections. Most comments reflected

disappointment in assignment processes which seemed to select jobs with

little evident regard or consideration for prior experience,

agreements, or desires.

Question 38 inquired if staying on active duty beyond the first

retirement opportunity would make it more difficult to find civilian

employment. Of the combined responses, 58% agreed. Additionally, the

response distributions for each group were almost identical.

Question 39 inquired if the scheduled 1989 termination of Vietnam

era GI Bill education benefits influenced retirement decisions. Of the

combined group of 861 officers, 63.5% indicated that GI Bill

termination would not influence their retirement plans. Responses were

independent of most demographic measures and prior or non-prior

enlisted background. However, a dependent relationship was evident

when compared to the total number of dependent children. The more

dependent children, the more likely that pending GI Bill termination

would influence retirement plans. Although the influence of proposed

GI Bill termination did not seem to influence retirement decisions,

many respondents indicated this would be more of an influence as the

termination date drew closer.

# V. Discussions, Conclusions, and Recommendations

## Overview

This chapter discusses limitations and assumptions affecting data collection and analysis, interpretations and conclusions about research hypotheses, and recommendations about the need for additional research.

## Assumptions and Limitations

**Assumptions.** The problem statement, research hypotheses, and survey instrument design used in this thesis were directly related to assumptions developed after the literature review. It was assumed that the developed survey instrument would provide useful data to support analysis and critique of the research hypotheses.

**Literature Review.** Most military-related literature had concentrated on the departure of junior officers or specific specialists before reaching retirement eligibility. Some military-related literature suggested different personnel retainability behavior between prior and non-prior enlisted officers, but those studies also looked at decisions to separate from the USAF before retirement eligibility. This thesis selected officers soon or currently eligible to retire because there was limited literature reflecting studies in this area.

Military- and non-military-related literature suggested relationships between job satisfaction and an act of turnover, but there were many and possibly complex intervening variables related to perceptions of satisfaction. This thesis assumed that responses to a

variety of survey questions about perceived satisfaction could support predictions of future turnover action.

Rand studies on USAF officer retirement approached turnover prediction from the point of view that financially related decisions, rather than turnover intent, might be the best predictors of turnover action. This thesis assumed that survey responses to a variety of financial conditions or impacts could provide accurate measurements of future turnover action.

This thesis pursued a study of diffe.ences between prior and non-prior enlisted officers to determine the merit of some popular notions that prior enlisted officers retire at their first opportunity more frequently than non-prior enlisted officers. Depending on the number of field grade officers needed in a particular career field, adverse manning might develop if a large percentage of company grade officers were prior enlisted and tended to retire before maturing into field grade ranks. Therefore, this thesis assumed that comparison of responses to a variety of demographic questions and other above mentioned areas would provide insights about differences between the two subsets of logistics officers that were soon or currently eligible to retire.

Survey Design. Survey instrument design was based on many assumptions about what might adversely affect survey response and design approaches that would hopefully mitigate those effects. Respondents were assumed to often be senior officers with responsible jobs that made many demands on their time. Therefore, survey design attempted to concentrate on ease of data entry and brevity. Special

forms, such as optically scanned score sheets, were avoided in favor of answers via simple check marks or circles entered on the instrument. This design also helped accommodate write-in responses or comments when question format or answer options might not match the respondent's perception of the best answer. Anonymous responses were requested to help assure candid data. To help respondents develop a favorable disposition toward the survey, personalized cover letters were used.

Limitations. Several limitations were intentionally imposed on initiation of this research effort, and additional limitations became evident as efforts continued.

_Initial Limitations_. The scope of this study was limited to officers in logistics career fields because the researchers had professional familiarity with these career areas and limited time resources. Efforts to keep the survey instrument brief, and thus encourage more returned surveys, imposed some limitations on the depth and redundancy of questions. This limited the ability to cross-check the consistency of collected data. Time constraints limited instrument testing to assure survey questions elicited accurate data for hypotheses testing.

Another theoretical limitation concerns the inability to conduct longitudinal studies based on retirement insights gained from this research effort. This limitation was imposed by time constraints, and further constrained by survey instrument and resulting data collection shortfalls addressed below. Longitudinal studies would be essential to measure the extent to which various measures such as intent to retire and perceived satisfaction related to retirement actions.

Subsequent Limitations. A significant limitation of ATLAS personnel data was the inability to clearly identify whether an officer had enlisted service. Additionally, personnel address data usually did not provide adequate mailing addresses. This required many addresses to be embellished or completely rewritten before address labels could be printed. Had address labels been prepared directly from ATLAS data, the response rate would have been much lower. Most of the surveys returned as undeliverable were due to incomplete or inaccurate addresses. In general, other requested ATLAS data appeared to be accurate and useful.

During the process of converting survey answers to numerical data, some limitations of the survey instrument became evident. The wording of some questions was interpreted differently than intended by the researchers, and/or the range of possible responses was not sufficient for many respondents. These situations developed different levels of subjective doubt about the usefulness of some data. As a result, some were not used, and analysis of other data involved some subjective judgments. Some specific problems are addressed later in this chapter. Appendix C summarizes lessons learned about the structure of questions and responses used in the survey instrument.

## Discussions

Hypothesis One. Except for rank and related military pay, prior and non-prior enlisted officers are peers in terms of demographic and biographical data.

Overview. Hypothesis one was statistically supported. The two groups of officers were statistically the same in terms of age,

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total number of dependent children, marital status, educational

level, and percent of family income earned by the spouse. Additionally, the

two groups expressed the same level of satisfaction with their jobs,

pay, and promotion opportunities, as well as present and expected

satisfaction with the USAF overall.

Similarities. Age can be a significant factor affecting an

officer's perceived ability to gain civilian employment. This factor

may explain why 56% of prior and 60% of non-prior enlisted officers

felt that staying beyond the first retirement opportunity would make

civilian employment more difficult. On the other hand, since only

21.6% of the prior and 25.6% of the non-prior enlisted officers

intended to retire when first eligible, concerns about ability to find

civilian employment might not have been a key factor in data on

retirement intents. Only 26.1% of those feeling that age would

adversely affect civilian employment intended to depart at their first

opportunity.

Marital status, percent of family income earned by the spouse, and

the number of dependent children reflect time and financial commitments

probably considered before a decision about retirement intent. Data

suggests that both groups of officers have similar commitments.

Although this thesis cannot determine if promotion selections are

similar for prior and non-prior enlisted officers, data suggests that

both groups of officers have a similar view about promotion opportunity.

Ideally, the importance of demographic and biographic similarities

between two groups lies in the intuitively appealing assumption that

such similarities might predict similar behavior in similar situations.

While it would be presumptuous to think that any questionnaire could address every aspect pertinent to an officer's retirement decision process, the questionnaire used in this thesis was intended to generate data on factors subjectively felt to be critical to retirement consideration. The collected data cannot predict that the two groups of officers would have similar retirement behavior. However, it would be reasonable to expect the many similarities between the two groups might lead to similar retirement intentions.

Hypothesis Two. Prior enlisted officers soon or currently eligible for officer retirement have the same retirement intentions as non-prior enlisted officers soon or currently eligible for retirement.

Overview. Hypothesis two was supported. The K-S Two-Sample Test indicated homogenous responses to question 25 about how soon after eligibility respondents intended to retire. A chi-square test indicated that when an officer intended to retire was independent of prior or non-prior enlisted status. When an officer intended to retire was found to be dependent on rank, TAFMS, and expressed satisfaction.

Retirement Intention. The K-S Two-Sample Test calculated a .0386 maximum absolute difference between the two distributions. The calculated critical maximum difference was .1274. Since this statistical testing could not detect a significant difference between prior and non-prior response distributions, it would seem that both groups of officers had homogenous responses when questioned about when they intended to retire. However, the large number of officers undecided about retirement intent (prior: 47.4%, non-prior: 32.9%) must be considered before accepting the K-S Two-Sample Test results.

It would have been useful to first differentiate between those who were and those who were not already eligible to retire, and then test for homogeneity between the two groups of officers, because an officer not yet eligible and undecided about when intending to retire could later decide to retire at the first opportunity. Statistical screening of such potential situations could not be done because flaws in the survey instrument prevented collection of this type of data. Survey instrument question 24 about retirement eligibility lacked a response category to identify if the respondent had already reached retirement eligibility. Also, improved question syntax could have better emphasized the USAF interpretation of officer retirement eligibility, such as being free of active duty commitments caused by promotion, school, and change of assignment in addition to the necessary service and/or commissioned time longevity requirements.

Despite these survey instrument and data collection shortcomings, interpretation of existing data could still provide some insights. Of the 176 prior enlisted officers who had not decided about retirement intent, only 28 (16%) had less than 20 years TAFMS; and 131 (74.4%) had 20 or more years TAFMS and 11 or more years TAFCS. If one assumed that few active duty commitments remain after 20 years TAFMS, then most of the prior enlisted officers undecided about retirement intent had already passed their first opportunity to retire. Of the 206 non-prior enlisted officers that were undecided about retirement intent, 105 (50.9%) had less than 20 years TAFMS and could still retire at the earliest opportunity.

Shenk's research (32:2) indicated that, in comparison to

non-prior enlisted officers, the prior enlisted officers had better retention. Her research only considered retention during early stages of a career. Thesis data on retirement eligibility stages of a career again suggested that prior enlisted officer retainability is higher. Frequency distributions for responses to question 25 about retirement intent indicated that 21.6% of the prior enlisted officers intended to retire during their first year of eligibility, whereas 25.6% of the the non-prior enlisted officers intended to retire during their first year. The popular belief that prior enlisted officers retire as soon as possible may well be erroneous.

Relationship to Rank. While the large number of undecided officers and the inability to determine the exact time of eligibility make results of retirement intent analysis suspect, the relationship between intent and rank also holds some interesting information.

The problem statement specifically mentioned that if prior enlisted officers retire at their earliest opportunity, an imbalance in expected major and lieutenant colonel resources could develop. Only 43 of 120 (35.8%) prior enlisted captains, and 21 of 101 (20.8%) prior enlisted majors expressed the intention to retire during the first year of eligibility. The relatively small percentages may indicate that any created imbalance would be insignificant.

The relationship between retirement intent and rank for the non-prior enlisted officers is partially explained by the promotion system. Non-prior enlisted officers approaching 20 years TAFMS as captains and majors have probably endured promotion disappointments. Due to subsequent dissatisfaction or the realization of slim chances for

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promotion, one would anticipate their intent to retire at the first
opportunity. Of the non-prior enlisted officer respondents, three
(100%) captains and 66 of the 81 (81.5%) majors indicated intent to
retire at the earlist opportunity.

It is interesting to note that lieutenant colonel respondents had
the largest percent of undecided responses. Over half (55.7%) were
undecided about when they would retire. This large percent could be
the result of awaiting the pending colonel promotion board results.
Non-selection for colonel could be a key factor in determining when to
retire. This position was supported by many write-in comments.

Relationship to TAFMS. The relationship to TAFMS indicated
that officers with 17 years TAFMS had the highest percent intent to
retire during the first year of eligibility. This intent decreased as
TAFMS increased. The percent of officers with intent to retire one to
two years, two to three years, and three to four years after
eligibility remained relatively constant throughout the TAFMS spectrum.
The percent of officers with intent to retire more than four years
after eligibility tended to increase with TAFMS. These trends did not
necessarily convey extremely useful information.

Of officers intending to retire at their first opportunity, non-
prior enlisted captains and majors were 57% of those with 17 years
TAFMS, 42.8% of those with 18 years TAFMS, and 35.7% of those with 19
years TAFMS. Previous promotion disappointment probably caused these
intentions.

Inability to identify when officers became, or were becoming,
eligible to retire prevented further analysis of officers intending to

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retire during the first year of eligibility. Of officers having 20 or more years TAFMS and intending to retire during the first year of eligibility, many were probably fulfilling commitments incurred by accepting assignments and/or promotions, since otherwise they had already reached retirement eligibility.

Five hundred thirty-four officers had more than 20 years TAFMS. This group consisted of 287 (53.7%) prior enlisted and 247 (46.3%) non-prior enlisted officers. Of each subgroup, 21.8% intended to retire more than four years after eligibility. TAFMS exceeding 20 years may suggest that many had already remained in service past reaching their first eligibility to retire. Additionally, it again reenforces the retirement intent similarity between the two groups.

Relationship to Satisfaction. The survey instrument used a Likert-type scale to measure relative degrees of satisfaction with a scale value of one indicating very dissatisfied, and five indicating very satisfied. For question 15, which sought a relative measure of current satisfaction with the USAF overall, there was no statistically significant difference between the mean response of prior and non-prior enlisted officers. The mean response of the combined group was 4.247, which indicated moderate present satisfaction with the USAF. There was also no statistically significant difference in the mean response to question 21, which sought a relative measure of predicted satisfaction with the USAF next year. The mean measure of both groups of officers was 3.774, which indicated less but still moderate expected satisfaction with the USAF next year.

Previous literature reviews indicated that job satisfaction was

typically related to expressed intent to leave an organization. This research partially supported that position. Data suggested that absence of satisfaction lead to earlier retirement intent. Of the 14 officers indicating that they were very dissatisfied with the USAF, 11 (78.6%) ndicated intent to retire at the earliest opportunity. Of the 61 officers indicating moderate dissatisfaction, 41 (67.2%) intended to retire during the first year of eligibility. Of the 33 officers indicating neither satisfaction or dissatisfaction, 20 (60.6%) indicated an intent to retire at the earliest opportunity.

While the absence of satisfaction may have been useful to help predict retirement at the earliest opportunity, expressed satisfaction did not necessarily relate to an officer's intent to stay past first retirement eligibility. Of the 743 officers who indicated moderate satisfaction or higher, 357 (48%) were undecided about retirement intent.

A comparison of present and expected future satisfaction found many decreases in expected future levels of satisfaction, in that 43.8% of those who were presently very satisfied expected to be less satisfied a year later. Of those expressing moderate current satisfaction, 32.9% expected a lower degree of satisfaction next year. Thirty-nine percent of those neither satisfied nor dissatisfied expected to have less satisfaction a year hence.

The above relationships, combined with data showing that 54.7% of those who had decided on retirement intent had done so during the past year, suggests that during the next year many undecided officers may lose satisfaction and decide about retirement intent.

Hypothesis Three. Prior and non-prior enlisted officers view the potential for increasing financial income or benefits as the primary factor affecting retirement plans.

Overview. Within the limitations of the present survey data, hypothesis three was not supported. Of the combined group of officers, 64.9% indicated that potential for increasing financial income or benefits was not the primary factor affecting retirement plans. Response to question 37, the key to testing this hypothesis, was found to be dependent only on the total number of dependent children. The more children, the higher likelihood that potential for an improved financial position became a key factor affecting retirement intent.

Rand studies (9,10) found that historical officer retirement decisions could have been effectively predicted by an econometric model that computed the maximum expected future income based on pay factors such as rank, years of service, and retirement entitlements. This suggested that financial considerations may have been the most important aspect of retirement intent. However, thesis data did not support that position. Write-in remarks did indicate that, while not the primary factor, financial considerations were one of the factors considered when making retirement decisions.

## Recommendations and Conclusions

Thesis data analysis reflected few demographic and/or biographic differences between prior and non-prior enlisted officers soon or currently eligible to retire. The similarity between both groups might lead to an anticipation of similar behaviors, and thesis data analysis confirmed that the two groups had similar retirement intents. Data

analysis further suggested that the absence of satisfaction might be an effective predictor of retirement intent for both groups of officers.

Retirement represents a costly loss of USAF experience that is difficult to replace. Additional study is needed to better understand retirement causes and the decision making process. Published findings from such studies might contribute to more effective retention and recruitment policies, as well as dispel potentially undeserved and unproductive opinions about prior enlisted officers. Additional study is also needed to better understand causes and relationships between aspects of dissatisfaction and retirement intentions. Should survey address or response data be desired in support of future research, please contact the authors of this thesis.

## Appendix A: <u>Survey Instrument</u>

**DEPARTMENT OF THE AIR FORCE**
HEADQUARTERS AIR FORCE MANPOWER AND PERSONNEL CENTER
RANDOLPH AIR FORCE BASE, TX 78150

0 1 MAY 1984

REPLY TO
ATTN OF: MPCYP

SUBJECT: Request for Survey Approval

TO AFIT/LS

1. The survey request of Captains Williams and De Bruin has been reviewed by HQ AFMPC Office of the Assistant for Retention (MPCHO) and the Personnel Survey Branch (MPCYPS) and is approved for administration. Your Survey Control Number is USAF SCN 84-46 which expires 31 Jun 84. The Privacy Act Statement should be deleted since names and social security numbers are not being collected.

2. Please forward a copy of the final report to this office and to MPCHO. If there are any questions regarding this action please contact Mr Robert E. Tetreault (512)650-5742.

FOR THE COMMANDER
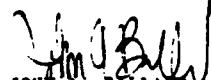
JOHN A. BALLARD, Maj, USAF
Acting Chief, Research &
    Measurement Division

**DEPARTMENT OF THE AIR FORCE**
AIR FORCE INSTITUTE OF TECHNOLOGY (AU)
WRIGHT-PATTERSON AIR FORCE BASE, OH 45433

REPLY TO
ATTN OF: LSH (LSSR 84S-13)/Capt Williams/Capt De Bruin/AUTOVON 785-4437

SUBJECT: Officer Retirement Intent Questionnaire

TO:

1. The attached questionnaire was prepared by a research team at the Air Force Institute of Technology, Wright-Patterson AFB, OH. It is designed to acquire research data about USAF officer retirement intents. Headquarters USAF Survey Control Number SCN 84-46 is assigned to the subject questionnaire.

2. Your candid and anonymous survey responses can help develop valuable insights into pertinent USAF issues such as recruitment and retainability. Therefore, I ask you to support this research effort by voluntarily providing accurate answers or comments for each question.

3. At your earliest opportunity, please remove this cover letter, complete the questionnaire, and use the return envelope included in this package. I appreciate your support.

LARRY L. SMITH, Colonel, USAF
Dean
School of Systems and Logistics

2 Atch
1. Questionnaire
2. Return Envelope

AIR FORCE—A GREAT WAY OF LIFE

This survey contains 39 questions designed to collect demographic, job
satisfaction, and retirement intent data from a large sample of active duty
USAF officers. The sample is intended to include only officers that will soon
be or are presently eligible to retire. Combined responses will be
statistically compared and analyzed as part of a Master of Science thesis
research effort. Individual questionnaire responses will not be addressed in
any fashion.

Please clearly annotate your response to each applicable question. For
planning purposes, anticipate that between 10 and 20 minutes will be necessary
to complete the questionnaire. A postage paid and appropriately addressed
envelope has been included for return of your completed survey. If for some
reason the envelope is lost, please return your completed survey to AFIT/LSMA,
Wright-Patterson AFB, OH 45433. Your candid and early response is greatly
appreciated. Thank you.

## PRIVACY STATEMENT

In accordance with paragraph 8, AFR 12-35, the following information is
provided as required by the Privacy Act of 1974:

    a. Authority:

        (1) 5 U.S.C. 301, Departmental Regulations; and/or

        (2) 10 U.S.C. 8012, Secretary of the Air Force, Powers, Duties,
Delegation by Compensation; and/or

        (3) EO 9397, 22 Nov 43, Number System for Federal Accounts Relating
to Individual Persons; and/or

        (4) DOD Instruction 1100.13, 17 Apr 68, Surveys of Department of
Defense Personnel; and/or

        (5) AFR 30-23, 22 Sep 76, Air Force Personnel Survey Program.

    b. Principal purposes. This survey is being conducted to collect
information to be used in research aimed at illuminating and providing inputs
to the solution of problems of interest to the Air Force and/or DOD.

    c. Routine uses. The survey data will be converted to information for
use in research of management related problems. Results of the research,
based on the data provided, will be included in a written master's thesis and
may also be included in published articles, reports, or texts. Distribution
of the results of the research, based on the survey data, whether in written
form or presented orally, will be unlimited.

    d. Participation in this survey is entirely voluntary.

    e. No adverse action of any kind may be taken against any individual who
elects not to participate in any or all of this survey.

1. What is your current active duty grade?

___ A. Second Lieutenant
___ B. First Lieutenant
___ C. Captain
___ D. Major
___ E. Lieutenant Colonel
___ F. Colonel
___ G. General


2. What is your current level of assignment?

___ A. HQ/MAJCOM/SOA
___ B. Numbered Air Force
___ C. Wing
___ D. Group
___ E. Squadron
___ F. Other (please specify) _____


3. Which of the following best describes your present assignment?

___ A. CONUS, accompanied
___ B. CONUS, unaccompanied
___ C. Overseas area, short tour, accompanied
___ D. Overseas area, short tour, unaccompanied
___ E. Overseas area, long tour, accompanied
___ F. Overseas area, long tour, unaccompanied


4. How long has it been since you completed your most recent overseas short tour?

___ A. Not applicable (I have not completed an overseas short tour)
___ B. Less than 3 years
___ C. At least 3 but less than 5 years
___ D. At least 5 but less than 7 years
___ E. At least 7 but less than 9 years
___ F. At least 9 but less than 11 years
___ G. More than 11 years


5. How long has it been since you completed your most recent overseas long tour?

___ A. Not applicable (I have not completed an overseas long tour)
___ B. Less than 3 years
___ C. At least 3 but less than 5 years
___ D. At least 5 but less than 7 years
___ E. At least 7 but less than 9 years
___ F. At least 9 but less than 11 years
___ G. More than 11 years

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6.  How many years total active federal military service (TAFMS) have you completed?

    ___ A.  At least 17 but less than 18 years
    ___ B.  At least 18 but less than 19 years
    ___ C.  At least 19 but less than 20 years
    ___ D.  At least 20 but less than 21 years
    ___ E.  At least 21 but less than 22 years
    ___ F.  At least 22 but less than 23 years
    ___ G.  At least 23 but less than 24 years
    ___ H.  At least 24 but less than 25 years
    ___ I.  At least 25 but less than 26 years
    ___ J.  26 or more years


7.  Which best describes your background?

    ___ A.  Regular officer, rated (no prior enlisted service)
    ___ B.  Regular officer, rated (prior enlisted service)
    ___ C.  Regular officer, non-rated (no prior enlisted service)
    ___ D.  Regular officer, non-rated (prior enlisted service)
    ___ E.  Reserve officer, rated (no prior enlisted service)
    ___ F.  Reserve officer, rated (prior enlisted service)
    ___ G.  Reserve officer, non-rated (no prior enlisted service)
    ___ H.  Reserve officer, non-rated (prior enlisted service)


8.  If applicable, how many years of prior enlisted service did you complete?

    ___ A.  Not applicable (no prior enlisted service)
    ___ B.  Less than 1 year
    ___ C.  At least 1 but less than 5 years
    ___ D.  At least 5 but less than 8 years
    ___ E.  At least 8 but less than 11 years
    ___ F.  11 or more years


9.  If you have prior enlisted service, how many years of total active federal commissioned service (TAFCS) have you completed?

    ___ A.  Not applicable (no prior enlisted service)
    ___ B.  Less than 6 years
    ___ C.  At least 6 but less than 7 years
    ___ D.  At least 7 but less than 8 years
    ___ E.  At least 8 but less than 9 years
    ___ F.  At least 9 but less than 10 years
    ___ G.  At least 10 or more years


10. Please enter your age in the following blank.

    ___ years old (at my last birthday)

11. What is your marital status?

___ A. Never been married
___ B. Married and spouse is not a member of a military service
___ C. Married and spouse is a member of a military service
___ D. Legally separated
___ E. Divorced and not remarried
___ F. Widowed

12. What percentage of your total family income does your spouse earn?

___ A. Not applicable because I have no spouse
___ B. Not applicable because my spouse does not have a paying job
___ C. My spouse's income is less than 10% of our family income
___ D. My spouse's income is 11% - 20% of our family income
___ E. My spouse's income is 21% - 30% of our family income
___ F. My spouse's income is 31% - 40% of our family income
___ G. My spouse's income is 41% - 50% of our family income
___ H. My spouse's income is 51% or more of our family income

13. What is your highest level of education?

___ A. High school
___ B. College degree (BS, BA, or equivalent)
___ C. Graduate work beyond bachelor degree (no Master's degree)
___ D. Master's degree
___ E. Postgraduate work beyond Master's degree
___ F. Doctorate
___ G. Other (please specify) _____

14. Please indicate in the blanks below the number of dependent children you have in each particular category.

_____ A. Total number of dependent children

_____ B. Number of children that are preschool or kindergarten age

_____ C. Number of children that are in elementary school (1st-6th grade)

_____ D. Number of children that are in junior high school (7th-9th grade)

_____ E. Number of children that are in senior high school (10th-12th grade)

_____ F. Number of children that are in college

For questions 15 through 23, please circle the letter corresponding to the description that best indicates your satisfaction with each subject:

| Very Dissatisfied | Moderately Dissatisfied | Neither Satisfied nor Dissatisfied | Moderately Satisfied | Very Satisfied |
|---|---|---|---|---|
| A | B | C | D | E |

15. What is your level of satisfaction with the USAF?      A B C D E

16. What is your level of satisfaction with your current job responsibility?     A B C D E

17. What is your level of satisfaction with promotion opportunities?     A B C D E

18. What is your level of satisfaction with your military pay and allowances?     A B C D E

19. What is your level of satisfaction with current retirement benefits?     A B C D E

20. What is your level of satisfaction with possible changes in retirement benefits?     A B C D E

21. What is your expected level of satisfaction with the USAF a year from now?     A B C D E

If you do not have a spouse or dependents, please skip questions 22 and 23.

22. What is your level of satisfaction with medical/dental benefits for your dependents?     A B C D E

23. What are your spouse's and dependent's level of satisfaction with the USAF (if applicable)?     A B C D E

In conclusion, we desire you to share your thoughts on your retirement
intents. (If you have prior enlisted service, please respond from the
perspective of retiring as an officer.)


24. How many years from now will you be eligible to retire?

___ A. Within one year
___ B. More than 1 but less than 2 years from now
___ C. More than 2 but less than 3 years from now
___ D. More than 3 but less than 4 years from now
___ E. More than 4 years from now


25. How soon after reaching retirement eligibility do you intend to retire?

___ A. Undecided
___ B. During the first year of eligibility
___ C. More than 1 but less than 2 years after eligible
___ D. More than 2 but less than 3 years after eligible
___ E. More than 3 but less than 4 years after eligible
___ F. More than 4 years after eligible


26. Have you formally established a retirement date with your CBPO?

___ A. Yes
___ B. No


27. If you have decided when you intend to retire, when was that decision
made?

___ A. Not applicable (I have not yet decided on retirement plans)
___ B. Less than one year ago
___ C. More than 1 but less than 2 years ago
___ D. More than 2 but less than 3 years ago
___ E. More than 3 but less than 4 years ago
___ F. More than 4 years ago


28. Have you selected the area where you intend to live after you retire?

___ A. Yes
___ B. No


29. For this question, please fill in the blank with the appropriate number.
Round up to the nearest number or enter 0 (zero) if undecided. During
your USAF career, how many years have you been stationed within 100 miles
of your selected retirement area?

____ years

30. Do you or your spouse have family members (other than dependents) within 100 miles of your selected retirement area?

   __ A. Undecided (I have not decided where I will retire)

   __ B. Yes

   __ C. No

31. Is your current assignment within 100 miles of your selected retirement area?

   __ A. Unknown (I have not decided where I will retire)

   __ B. Yes

   __ C. No

32. What rank do you expect to be when you retire?

   __ A. Not applicable (I have not yet decided on this aspect of my retirement plans)

   __ B. Captain

   __ C. Major

   __ D. Lieutenant Colonel

   __ E. Colonel

   __ F. General

33. Dp you expect to be in a primary zone for promotion consideration when you intend to retire?

   __ A. Undecided (I have not yet decided on retirement plans)

   __ B. Yes

   __ C. No

34. If selected for promotion, would that vary your retirement intentions?

   __ A. Not applicable (I have not yet decided on this aspect of my retirement plans)

   __ B. Undecided whether I would change my retirement intentions

   __ C. No effect (promotion selection would not change my retirement plans)

   __ D. Would delay retirement at least until after the minimum time needed to retire at the higher rank

35. Suppose you just received a permanent change of station (PCS) assignment effective 6 months from now, and you were eligible to retire in lieu of PCS. How would such circumstances probably affect your retirement intents?

   __ A. I would intend to retire instead of accepting any PCS assignment.

   __ B. I would intend to retire instead of accepting any short tour PCS.

   __ C. I would intend to retire instead of accepting any overseas PCS.

   __ D. Undecided (It would depend on the assignment)

For questions 36 through 39, please circle the provided word(s) or insert your own word(s) that would make the sentence best match your opinion. If your comments exceed the underlined space, please continue into the space below each question.

36. Current USAF personnel policies ( do / do not / _____ )
    encourage me to retire at the earliest opportunity.

37. The potential for increasing my financial income or benefits ( is / is not /

    _____ ) the primary factor
    affecting my present or future retirement plans.

38. Staying on active duty beyond my first opportunity to retire ( will /

    will not / _____ )
    make it more difficult for me to find employment in the civilian sector.

39. The current 1989 scheduled termination of Vietnam era GI Bill educational

    benefits ( does / does not / _____ )
    influence my present or future retirement plans.

Thanks for your time and effort to candidly answer this survey. If you wish to share any additional thoughts about your retirement intents, please feel free to include them on a separate sheet of paper.

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Appendix B:  Summary of Survey Questions, Variable Measures,
and Statistical Tests Performed

| Ques-<br>tion | Type of<br>Measure | Types of<br>Test(s) |
|---|---|---|
| 1. | Ordinal | Response frequency analysis of prior, non-prior,<br>and combined data.<br>Crosstabulation as an independent variable with<br>questions 25-28, 34, and 36-39. |
| 2. | Nominal | Response frequency analysis of prior, non-prior,<br>and combined data.<br>Crosstabulation as an independent variable with<br>question 25. |
| 3. | Nominal | Response frequency analysis of prior, non-prior,<br>and combined data.<br>Crosstabulation as an independent variable with<br>question 25. |
| 4. | Ordinal | Response frequency analysis of prior, non-prior,<br>and combined data. |
| 5. | Ordinal | Response frequency analysis of prior, non-prior,<br>and combined data. |
| 6. | Interval | Response frequency analysis of prior, non-prior,<br>and combined data.<br>K-S One-Sample test.<br>K-S Two-Sample test.<br>Crosstabulation as an independent variable with<br>questions 25-28, and 36-39. |
| 7. | Nominal | Response frequency analysis of prior, non-prior,<br>and combined data.<br>Crosstabulation as an independent variable with<br>questions 24-28, 34, and 36-39. |
| 8. | Nominal | Response frequency analysis of prior, non-prior,<br>and combined data.<br>Crosstabulation as an independent variable with<br>question 25. |
| 9. | Nominal | Response frequency analysis of prior, non-prior,<br>and combined data.<br>Crosstabulation as an independent variable with<br>question 25. |

| Ques- tion | Type of Measure | Types of Test(s) |
|---|---|---|
| 10. | Interval | Response frequency analysis of prior, non-prior, and combined data. K-S One-Sample test. T-test. K-S Two-Sample test. Crosstabulation as an independent variable with question 25-28, and 36-39. |
| 11. | Nominal | Response frequency analysis of prior, non-prior, and combined data. Crosstabulation as an independent variable with questions 25, 36-39. |
| 12. | Nominal | Response frequency analysis of prior, non-prior, and combined data. Crosstabulation as an independent variable with questions 25-29. |
| 13. | Ordinal | Response frequency analysis of prior, non-prior, and combined data. Crosstabulation as an independent variable with questions 25, 36-39. |
| 14. | Interval | Response frequency analysis of prior, non-prior, and combined data. K-S One-Sample test. T-test. K-S Two-Sample test. Crosstabulation as an independent variable with questions 25, 36-39. |
| 15. | Interval | Response frequency analysis of prior, non-prior, and combined data. K-S One-Sample test. T-test. Crosstabulation as an independent variable with question 25. |
| 16. | Interval | Response frequency analysis of prior, non-prior, and combined data. K-S One-Sample test. T-test. Crosstabulation as an independent variable with question 25. |

| Ques-tion | Type of Measure | Types of Test(s) |
|---|---|---|
| 17. | Interval | Response frequency analysis of prior, non-prior, and combined data. K-S One-Sample test. T-test. Crosstabulation as an independent variable with question 25. |
| 18. | Interval | Response frequency analysis of prior, non-prior, and combined data. K-S One-Sample test. T-test. Crosstabulation as an independent variable with question 25. |
| 19. | Interval | Response frequency analysis of prior, non-prior, and combined data. |
| 20. | Interval | Response frequency analysis of prior, non-prior, and combined data. |
| 21. | Interval | Response frequency analysis of prior, non-prior, and combined data. K-S One-Sample test. T-test. Crosstabulation as an independent variable with question 15 and 25. |
| 22. | Interval | Response frequency analysis of prior, non-prior, and combined data. |
| 23. | Interval | Response frequency analysis of prior, non-prior, and combined data. K-S One-Sample test. T-test Crosstabulation as an independent variable with question 25. |
| 24. | Ordinal | Response frequency analysis of prior, non-prior, and combined data. |
| 25. | Ordinal | Response frequency analysis of prior, non-prior, and combined data. Crosstabulation as an dependent variable with questions 1-3, 6-18, 21, 23, 29-32, and 36-39. |
| 26. | Ordinal | Response frequency analysis of prior, non-prior, and combined data. Crosstabulation as an dependent variable with questions 1, 6, 7, and 10. |

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| Question | Type of Measure | Types of Test(s) |
|----------|-----------------|------------------|
| 27. | Ordinal | Response frequency analysis of prior, non-prior, and combined data.<br>Crosstabulation as a dependent variable with questions 1, 6, 7, and 10. |
| 28. | Ordinal | Response frequency analysis of prior, non-prior, and combined data.<br>Crosstabulation as an dependent variable with questions 1, 6, 7, and 10.<br>Crosstabulation as an independent variable with question 25. |
| 29. | Interval | Response frequency analysis of prior, non-prior, and combined data.<br>Crosstabulation as an independent variable with question 25. |
| 30. | Nominal | Response frequency analysis of prior, non-prior, and combined data.<br>Crosstabulation as a dependent variable with question 28.<br>Crosstabulation as an independent variable with question 25. |
| 31. | Nominal | Response frequency analysis of prior, non-prior, and combined data.<br>Crosstabulation as a dependent variable with question 28.<br>Crosstabulation as an independent variable with question 25. |
| 32. | Nominal | Response frequency analysis of prior, non-prior, and combined data.<br>Crosstabulation as an independent variable with question 25. |
| 33. | Nominal | Response frequency analysis of prior, non-prior, and combined data. |
| 34. | Nominal | Response frequency analysis of prior, non-prior, and combined data.<br>Crosstabulation as a dependent variable with questions 1 and 7. |
| 35. | Nominal | Response frequency analysis of prior, non-prior, and combined data. |

| Ques-tion | Type of Measure | Types of Test(s) |
|-----------|-----------------|------------------|
| 36. | Nominal | Response frequency analysis of prior, non-prior, and combined data. Crosstabulation as a dependent variable with questions 1, 6, 7, and 10-14. Crosstabulation as an independent variable with question 25. |
| 37. | Nominal | Response frequency analysis of prior, non-prior, and combined data. Crosstabulation as a dependent variable with questions 1, 6, 7, and 10-14. Crosstabulation as an independent variable with question 25. |
| 38. | Nominal | Response frequency analysis of prior, non-prior, and combined data. Crosstabulation as a dependent variable with questions 1, 6, 7, and 10-14. Crosstabulation as an independent variable with question 25. |
| 39. | Nominal | Response frequency analysis of prior, non-prior, and combined data. Crosstabulation as a dependent variable with questions 1, 6, 7, and 10-14. Crosstabulation as an independent variable with question 25. |

Appendix C: Summary of Survey Question Shortfalls,
Recommended Changes, and Additions

Ques-    Problems and/or Recommendations
tion

1.    No problems and no recommended changes.

2.    No significant problems, but a more descriptive range of
      answers could have been useful.

3.    No problems, but the distinction for a CONUS unaccompanied tour
      was not needed.

4.    Problems because no response available if respondent was on an
      overseas long tour.

5.    Problems because no response available if respondent was on an
      overseas short tour.

6.    No problems, but it would have been easier to ask respondents to
      fill in a blank with the appropriate TAFMS years.

7.    No problems and no recommended changes.

8.    No significant problems, but respondents occasionally
      interpreted aviation cadet time as enlisted time. The question
      should have reminded the respondent to not consider aviation
      cadet time as enlisted time.

9.    No problems, but it would have been easier to ask the
      respondents to fill in a blank with the appropriate TAFCS
      years.

10.   No problems and no recommendations.

11.   No problems and no recommendations.

12.   No problems and no recommendations.

13.   No problems, but the distinction of effort between levels of
      degrees was not particularly useful.

14.   No significant problem, but some respondents confused total
      numbers of dependent children with total numbers of children.
      Either a quick definition of dependent or underline emphasis of
      dependent may have helped. Also, a category for dependents in
      other categories would have helped in a few cases, based on
      write-in responses.

| Ques-<br>tion | Problems and/or Recommendations |
|---|---|
| 15-23. | Numbers instead of letters may have been easier for respondents to relate to indications of relative satisfaction levels. |
| 15. | No problems, but asking for an overall level of satisfaction may have been clearer to understand. |
| 16. | No problems and no recommendations. |
| 17. | No problems and no recommendations. |
| 18. | No problems and no recommendations. |
| 19. | No problems and no recommendations. |
| 20. | Problems. Possible changes in the retirement system were not defined. In any event, possible retirement system changes might not affect those soon or already eligible to retire under existing entitlements. |
| 21. | No problems and no recommendations. |
| 22. | Problems. Medical and dental support should not have been combined since dependent dental support often does not exist. The question should have been limited to medical support, so that responses would have clearly related to a specific area. |
| 23. | Possible problem. Response requires speculation about dependent satisfaction. |
| 24. | Many problems. The concept of officer retirement eligibility includes minimum TAFMS and TAFCS plus the absence of active duty commitments. However, active duty commitments can change due to assignment and promotion action. The concept of officer retirement should have been clear to each respondent, yet reenforcing that concept by redefining it within the question would have created more confidence in getting valid responses. Possible responses were inadequate because there was no option provided for those already eligible. |
| 25. | No significant problems, but prior reenforcement of the concept of officer retirement eligibility would have been appropriate. |
| 26. | Some problems. The question was intended to provide some insight between intent to retire and actual commitment to retire. However, an insignificant amount of data was collected concerning commitment to retire. Additionally, responses to this question were inadequate because there was no option for those who had retirement dates established by the USAF. |

| Ques-<br>tion | Problems and/or Recommendations |
|---|---|
| 27. | No significant problem, but it would have been easier for the respondent to fill in a blank with the appropriate number of years. |
| 28. | No problems and no recommendations. |
| 29. | Some problems. Possible question responses did not provide an option for undecided due to not having decided on this aspect of retirement intent. |
| 30. | No significant problems. The question intended to help determine relationships between the selection of a retirement area, if other family members were in that area, if presently (or in the past) assigned in the area, and if willing to accept a PCS out of the area. Since there were so many officers undecided about retirement and there were problems with at least one other related question, this question generated data of limited use. |
| 31. | No problems, but data not significantly used because of problems with related questions. |
| 32. | No problems and no recommendations. |
| 33. | No problems, but response 1 would have been more appropriate if the term not applicable had been used instead of undecided. |
| 34. | No problems and no recommendations. |
| 35. | Many problems because provided responses were not mutually exclusive, and there was no response for willingness to accept any assignment. |
| 36-39. | Because of the vague nature of these subjects, none of these questions created data that was useful for statistical analysis. However, these questions offered an opportunity to elicit respondent perceptions about these broad subjects, and many write-in responses were received. |
| 36. | Some problems because of the many possible perceptions of USAF personnel policies. Perhaps a better structure for this question would have been to ask the respondent to list, in order of importance, up to three policies (if any) thought to encourage retirement at the earliest opportunity. Although data from such a response would be more difficult to classify, results would have been more meaningful. |

| Ques-tion | Problems and/or Recommendations |
|---|---|

37.　No problems and no recommendations.

38.　Many potential problems.　The respondent's ego may interfere with objective consideration of this question, since it might be natural to think one could get a job.　It may also be intuitive to expect later retirement and older age to restrict some employment opportunities.　It may have been more productive to have asked respondents to rank order a questionnaire provided list of subjects which might influence retirement intent.　It would also have been productive to ask the respondents to list the three most important subjects that influenced or will influence their retirement decisions.

39.　No problems, but the subject matter could have been included as part of the list of subjects suggested for question 38.

After experience gained from entering and analyzing questionnaire data, it became evident data from some additional questions would have been useful.　A question about source of commission would have been helpful to ensure aviation cadet time was not considered as enlisted time.　It would have also provided some data to compare to previous studies.　More satisfaction related questions would have been useful to better analyze how the absence of satisfaction related to retirement intent.　Based on several write-in responses, at least one additional satisfaction question should have asked about the assignment selection process.　To help determine an individual's intent to retire, it would have been productive to know many years of an USAF career the respondent intended to pursue.

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BETWEEN PRIOR AND NON-PRIOR ENLISTED OFFICERS

Thesis Chairman:   Clinton F. Gatewood, Captain, USAF

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**DD FORM 1473, 83 APR**          EDITION OF 1 JAN 73 IS OBSOLETE.

Personnel turnover and its many varied organizational costs are frequently explored and documented in private sector professional literature. Officer retirement is a type of personnel turnover that causes many adverse USAF conditions, such as loss of experience, which is difficult or costly to replace. Few published reports document studies of retirement causes, and fewer address comparisons between prior and non-prior enlisted officers.

A survey instrument was used to collect data for analysis of retirement intent, demographic, and biographical differences among prior and non-prior enlisted officers soon or currently eligible for officer retirement. The sampled officers worked in logistics career fields. Data on responses to retirement intent, demographic, and biographic questions reflected that the two groups were similar, which might suggest similiar behavior. Prior or non-prior enlisted background would not have been an effective predictor of retirement intent. Thesis data suggested that the absence of job satisfaction might be an effective predictor of retirement intent for both groups of officers.

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